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THE SYNTHETIC PHILOSOPHY OF EXPRESSION

AS APPLIED TO

THE ARTS OF READING, ORATORY,
AND PERSONATION

BY

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It is a truth perpetually illustrated, that accumulated
facts lying in disorder begin to assume some order *if an
hypothesis is thrown among them*

HERBERT SPENCER

SIXTH EDITION.



BOSTON, NEW YORK, AND CHICAGO
HOUGHTON, MIFFLIN AND COMPANY
The Riverside Press, Cambridge

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The Riverside Press, Cambridge, Mass., U. S. A.
Electrotyped and Printed by H. O. Houghton & Company.

PREFACE.

THE study of Human Expression has for centuries attracted either the curious or critical attention of one or more of the great minds of each succeeding age. But it is only within the last half of the present century that this important subject has presented such a unity of classified knowledge as to make good its claim to be ranked among the recognized sciences.

We may confidently say that to the researches of two great philosophic minds, Darwin and Mantegazza, we owe the substance of that body of truth which forms the present Philosophy of Human Expression, and with equal confidence we may assert that to François Delsarte we owe the practical application of philosophic methods to the speech arts, — Reading, Oratory, and Dramatic Expression.

Darwin, while making the now world-renowned voyage of the *Beagle*, incidentally gathered the data upon which he founded the conclusions given the world in his great work, “The Expression of the Emotions in Man and Animals,” — a treasury of exhaustive research and thorough analysis.

Taking a comprehensive survey of the mass of material left by the early physiognomists, he correlated the empirical observations of such more modern writers as Lavater, Gratiolet, and Piderit with the exact scientific knowledge of Sir Charles Bell and Duchenne, in their studies of the Anatomy of Expression; and by a series of broad generalizations founded his philosophy upon three principles which must forever remain as foundations of the Philosophy of Human Expression.

The three principles by which Darwin accounted for most of the expressions of man and animals are: —

I. *The principle of serviceable associated habits.*

II. *The principle of antithesis.*

III. *The principle of the direct action of the nervous system on the body, independently of the will, and independently, in large part, of habit.*

Darwin's masterly presentation, published in Europe in 1872, and in America in 1875, awakened an intense interest in the scientific world. It startled many minds into alarm by its bold theories based upon the modern hypothesis of evolution. But it came as a draught from a living spring to men thirsting for new truth, and tired of teleological explanations of natural phenomena that did not explain.

To no one did this message of Darwin come

with a greater awakening impulse than to Paolo Mantegazza, a Florentine scientist, who has literally made the globe his quarry in search for human expression.

Accepting with an enthusiasm born of conviction the deductions, based upon evolution, of Darwin, he drew from a vast storehouse of special observations and experiences among all races of mankind the material for his celebrated work, published in Paris in 1885, "*La Physionomie et l'Expression des Sentiments.*"

This work gives in detail what Darwin has given in general. It presents the most critical and exact analysis of the human body and each of its expressive organs, with a wealth of illustration suggestive of the widest and most searching methods of modern science.

We turn from these great masters of philosophic thought to Delsarte. And we are compelled to say that *there is to-day no such body of systematized knowledge, left by this great teacher — and open to the world — as, standing alone and without interpretation, merits the title of a philosophy of expression.*

The knowledge left by Delsarte is fragmentary, and often obscure and incoherent. And yet the extracts from his manuscripts, which have from time to time been given the world by his disciples, show that a strong intellect and a stronger psychological insight were at work, even to the hour of his death, striving to solve the problems of human expression.

We cannot escape the conviction that with Delsarte insight was greater than reason. He was a greater teacher than thinker, a greater seer than philosopher. We think it will be found that the world owes a debt of gratitude to Delsarte, not for any profound philosophy, but for showing how a philosophy of expression may be practically and successfully taught.

It now only remains for the author of this treatise to attempt to justify the appearance at this time of the *Synthetic Philosophy of Expression*.

For more than twenty years a teacher and student of the Art of Expression, he well remembers the appearance of the great work of Charles Darwin. It may with truth be said that until Mr. Darwin wrote no such thing as a science of expression existed or was possible. His application of the principles of evolution to expression was the first step of the new advance. His great book widened the horizon for every thoughtful student. To the author of this volume it was the sunrise of a new day.

The work of Mantegazza, issued only last year, acknowledges his indebtedness to Darwin, and emphasizes and enforces his conclusions.

But neither of these great writers attempted to apply their philosophy to the conscious art technique by which the reader, actor, or orator enforces his thought and passion. They made no claim to be teachers, nor even to suggest

how the principles formulated by them might be taught.

In this treatise the author has attempted to show how the philosophy of these great discoverers may be applied to the conscious art forms which every expressive speaker must employ.

He has largely adopted the nomenclature of Delsarte. He has not hesitated, however, to criticise the dicta of the great teacher whenever he has found what he considers error or unsound statement. Thus, he has felt obliged to substitute the term *Emotive*, as signifying a state of the Being, for *Moral*, and the term *Poise*, as signifying a mode of motion, for *Normal*.

Against the empirical statement, accredited to Delsarte, of Nine Laws of Gesture as ultimate in expression, he has felt compelled to enter a decided word of protest. He has attempted to show that a single principle — the Law of Correspondence — underlies these nine laws formulated by Delsarte, as well as the numerous categories presented as laws of gesture by his followers.

The author asks the special attention of the student of Expression to the correspondences illustrated by the revelations and implications of the globe, and to his argument that all our gestures bear fixed relations to the lines, spaces, arcs, and forms of the globe (see Chapters X. and XII.).

So far as he is aware, no serious attempt has

been made by the writers upon Delsarte to apply his philosophy to the two great agencies of expression, Voice and Articulate Speech. We think we do no injustice to Delaumosne, or Arnaud, or Alger, when we pronounce their discussions to be incomplete. The author of this treatise has attempted to run the same parallels of inference and deduction in his discussion of voice and articulation that he has used in his treatment of gesture. He submits his discussion of these great agents of expression (see Chapters XVI. and XVII.) to the critical judgment of thoughtful students.

In conclusion, he may be permitted, in justice to his intent, to say that he has made an honest and sincere effort to present a consistent and logical body of truth, which he hopes may hold an humble place as a philosophy in the literature of human expression. He has thrown "an hypothesis into the mass of accumulated facts lying in disorder" known as the Delsarte System of Expression, in hopes that if he has been unable to evolve such an orderly procedure of logical statement as may merit the title of a philosophy, his effort may stimulate other and better thinkers to a broader unfolding of the Science of Expressive Man.

BOSTON, JUNE, 1886.

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THE SYNTHETIC PHILOSOPHY OF EXPRESSION.

CHAPTER I.

FIRST PRINCIPLES.

TH**ERE** are two subsistences of whose reality man is conscious, and whose recorded phenomena, and deductions therefrom, make the sum of that knowledge which he calls science.

These subsistences are (1) Matter; and (2) Spirit, Mind, or Soul.

(a.) Nothing exists or can exist, so far as we know, or can think, that is not one or the other of these actual existences. They are the universal whole.

There are two words, everywhere spoken, when man would cover with a name his concept of the aggregate of Matter and the aggregate of Mind.

These words are the Universe, and God. The Universe is matter in form, occupying Space, existing in Time, held by law.

God is Spirit ; and is sustaining Cause, animating Centre, and pervading Soul of the Universe.

(b.) Matter is the reality of space. The concept of the Greek mind, adopted by modern science, is that universal space is filled with a tenuous and imponderable form of matter — the æther. Matter is composed of atoms. These are innumerable, infinitely small, indivisible, and indestructible.

When atoms aggregate, new bodies appear ; when they disaggregate, bodies previously existing disappear. The Universe alone sums up their totality.

All masses are globes, both the infinitely small and the infinitely great, and are in never-ceasing motion.

(c.) Both the infinitely small and the infinitely great are alike unthinkable.

Take the infinitely small : Sir William Thompson conceives that a drop of water is made up of units so small, that could we magnify this single drop to the size of the earth, the atoms of which it is composed would not be larger than a cricket-ball !

Take the infinitely great : Its spaces are simply inconceivable. There is no circumference, the centre is everywhere.

Gigantic masses in globular form are scattered in all directions through this immensity of space. They fill remote depths of unfathomable abysses. They revolve around themselves and around each other, in orbits to which they are held by surrounding attractions.

Our sun with its pellets of cosmic stuff, including the earth, about which we are so much concerned, according to Herschel is moving through space toward some remote and unknown centre, in the direction of the constellation of Hercules.

The grandest conclusion of modern science is that the Universe is bound together in Time and Space as a single whole. Said Galton : "There is nothing as yet observed in the order of events, to make us doubt that the Universe is bound together in space and time, as a single Entity."

So we may affirm of these two subsistences, Matter and Spirit, that they are Body and Soul of the Universe.

And further, that it is unthinkable that Matter can exist and be active without Soul ; or that Soul can manifest its existence without Body.

(d.) Looking out upon the crowding phenomena which day and night unfold, the greatest philosophic thinker now upon the planet, Herbert Spencer, is forced thus to speak : "Among the mysteries which become the more mysterious the more they are thought about, there will remain the one absolute certainty, that man is ever in the presence of an Infinite and Eternal Energy from which all things proceed."

And Oken, interpreting the problem from the metaphysical side, said : "The Universe is an analysis of the self-consciousness of God ; Its appearance is a synthesis of His self-consciousness."

Now from the broad, the general, the universal, let us descend to the restricted, the particular, the immediate. From concepts of the infinite of Matter and Soul as revealed in the Universe, let us consider the finite of Matter and Soul as revealed in Man.

(e.) That man images the Universe — that he includes in his being all forms, forces, essences — that he reflects

through his organism the universal whole, are no longer fancies, dreams, and speculations of poets and transcendental philosophers. The modern law of Evolution binds together the problems of Natural History, as Newton's laws bind together the motions of the heavenly bodies.

When the consciousness of man shall have digested the amazing deductions of such minds as Spencer and Darwin, Huxley and Fiske, as to man's origin and appearance on the earth; when the materialist shall have put in his evidence to the last word, and all its importance shall have been fully realized and fairly weighed, I foresee that the pendulum of human thought and belief will swing back toward the grander conceptions of Oken and Swedenborg and Emerson, towards which goal all this challenging of Nature inevitably leads; that the Spiritual is at the centre both in the Universe and in Man, who reflects and images the Universe.

Said Schopenhauer, with immense significance: "The Materialists endeavor to show that all, even mental, phenomena are physical; and rightly: — only they do not see that on the other hand everything *physical* is at the same time *metaphysical*!"

Man as we find him on this earth is a union of matter and Soul.

Let us call this mysterious union of matter and Soul in form, The Organism.

And we may say, Man is a Soul served by organs.

Now certain necessities result from such an organization as man presents.

Of necessity man is a creature limited by three unavoidable restrictions. These restrictions are Space, Time, and Motion.

And we may say that, standing upon the earth, these three restrictions hold him, inexorably, in their grasp.

And further — a most important conclusion — we shall find that all his expressions, whether of Voice, Gesture, or Articulate Speech, bear definite relations to these three great restrictions.

And we should be able to formulate a complete Philosophy of Expression, were we able to state all man's relations to these three restrictions.

(f.) Let us try to make plain by a diagram¹ our idea of man conditioned by Space, Time, and Motion.

We project one side of a triangle.² The word *Space* we write over the left side. Space holds all things, small, great and greatest. It holds man: where can he go out of Space?

The right side of our triangle is struck out. *Time*. Time is an unavoidable condition of the Being. Once man was not on earth as apparition. Now he is (it is present). He was yesterday (it has passed). He will be . . . Ah! how long! where, whence, under what conditions?

The third line is sketched. — *Motion*. Motion is Force expending itself. And Force is the source of all active phenomena occurring in the material world. Motion is the evidence of a Force behind it. Man as mass is matter. So the cosmic forces, gravity, electricity, etc., acting upon this mass, are a most formidable restriction. In the last analysis our sensations are only so many modes of motion. When vibration reaches the conscious self we say, "I feel, I taste, hear, see, smell, which translated mean, I vibrate, I am set in motion!" See what modern science says of these pulses from the outer, beating in upon the conscious self.

¹ The blackboard and diagram have come to be essential aids in the presentation of abstract ideas. He is a poor teacher to whom they are not indispensable.

² We shall have frequent occasion to use the triangle in formulating abstract ideas. In using this figure, or when speaking of triads or trinities, we wish it understood that no theological signification is intended.

If the air vibrate oftener than sixteen, but less often than 30 thousand times in a second we say, "I hear music!"

The transfer of energy oftener than 30 thousand and less often than 458 trillions in a second, "I feel heat!" At the rate of 458 trillions, "I see red!" And the sensation of 577 trillions of ether vibrations in a second is translated by our consciousness as green, while vibrations pulsing through the ether at the rate of 727 trillions become violet, in our consciousness.

We may now venture to put our idea in diagram. Let us call it the Triad¹ or Trinity of Restriction. It will come to bear an increasing interest and importance as we proceed.



Thus is man conditioned by an environment from which there is no escape.

Space, Time, and Force showing itself as Motion, are his greatest earthly restrictions.

Let us put our idea into three propositions:—

1. *Soul can manifest itself, both in the Universe and in man, only through matter.*

2. *All manifestations of Soul—both in the Universe and in man—must declare themselves in relation to, and correspondence with, Space, Time, and Motion.*

3. *Whatever successively appears in Time is simultaneously extended in Space.*

Thus self-motion, motion of the exterior, which we can see is sent from the interior, is our only evidence of life, and is the only, but ultimate, distinction between the organic and inorganic.

¹ The idea of triads is older than Aristotle. Far back of Greece, in Chaldea, Persia, Egypt, Assyria, three was the sacred number, and back of these records existed a traditional *three*!

The organic dies so soon as motion disappears in it. The inorganic lives so soon as motion enters it.

When the principle of Life resides in a mass moved from a centre, it is an Organism. Oken's definition reads: "An Organism is a circumscribed, closed mass which moves itself."

We may predicate of any organism these things:—

1. An organism is mass in form, with controlling centre and near environment.

2. While centre and near environment are one, and continue as one, there is Life.

3. When this relation of controlling centre and controlled environment no longer exists, what was near environment becomes remote. Then comes the return of specialized matter to the general mass of the earth. This is the disappearance or death of the organism. This is the retreat of the individual into the Universal.

Said Robin: "To live and to crystallize are two properties never united."

A diagram will make plain our idea.

AN ORGANISM.



In our diagram the life or psychic element is

centre. The centre controls its body, mass, or near environment.

This is true of all animals. As the animal evolves higher psychic elements, it becomes able to control its near environment for higher expressions than those of merely maintaining and perpetuating its life.

It becomes able to comprehend and control something of its remote environment. Man of this era has a much greater control of remote environment than any other animal. And the perfected man of the future will attain to a knowledge and control of his two environments, inconceivable to the most advanced men of to-day.

(g.) Let us examine the relations of body and psychic as they present themselves in the most perfect earthly organism, that of man.

To "bode" is to portend, to foreshadow. The Anglo-Saxon word "bodian" meant, to announce, to tell. To "body," then, is to produce in form, to cause to appear. So, a body is an appearance, an apparition, a phenomenon.

Now that which is bodied cannot be the same thing as the body. It must be another thing, another somewhat. Body is exterior, and is seen. This other is interior, and is unseen. The Body is container. This other is contained. We call the Outer, Body. The Inner we call Soul.

The body holds its form, substance, and continuance from the Soul. It is held out of, and separated from, the great mass of matter by the Soul. When let go by the Soul it disappears as Organism. There is a triumph of cosmic over organic force.¹

¹ This twofold division of the organism, into body and soul, is comparatively recent in the history of man. Says Herbert Spencer: "The

We may now venture a definition of the two entities which make the organism that we call Man.

1. *The Body, or Exterior, is a persistent aggregate and continuance of objective phenomena.*

2. *The Soul, or Interior, is a persistent aggregate and continuance of subjective phenomena.*

3. *All phenomena of the Body are expressible in terms of Matter and Motion.*

All phenomena of the Soul are expressible in terms of Thought and Feeling.

And it is upon the related phenomena of the Organism that we base the Science of Expression, which is a branch of the broader Science of Æsthetics.

So that a Philosophy of Expression is a branch of the Philosophy of Æsthetics, which is the Philosophy of the Fine Arts.¹

(h.) After all is said of the result of modern investigation into the material organ of the mind, the brain, the

hypothesis of a sentient, thinking entity dwelling within a corporeal framework is now so deeply woven into our beliefs and into our language that we can scarcely imagine it to be one which the primitive man did not entertain and could not entertain."

¹ It was a bold generalization of Ludwig Noire that divided the empire of Philosophy into two great divisions, Kinetics and Æsthetics.

By Kinetics he would consider as a problem of pure mechanics the objective world, from the first motion of the atom to the revolutions of the solar system; from the formation of the first cell to the life of man.

By Æsthetics he would solve the subjective world, from the first tremor of an embryo to the most brilliant achievements of the mind; from the first reaction of the monera to the highest flights of human genius.

great secret, "What is and where is Soul?" constantly eludes us. Said Serres: "We have been dissecting the brain since the age of Galen, yet there is not an anatomist who has not left his successor something to do." Said Ribot: "In the presence of the fibres of the brain we are like hackney-coachmen, who know the streets and the houses, but know nothing of what goes on inside them."

And the latest writer, M. Luys, who has brought the microscope and the resources of photography to his aid to complement years of observation, study, and experiment in one of the great hospitals of Paris, declares that the secrets of nervous organization escape from our eyes as fast as we press into the regions where they conceal themselves.

And it is not to be wondered at that men divide themselves into two schools of thought, — the Materialistic and the Spiritualistic, — when brought to confront this mystery. The vice has been that neither school is disposed to treat dispassionately the thought of the other.

Says the Materialist, with scalpel in hand, and a brain fresh from the body before him: "I cannot find, in all this mass of white and gray matter, the thing which you call Soul. The microscope discloses a marvelous structure, not open to unaided vision. I find, as the unit of structure, the cell, with nucleus as centre, and nucleolus as centre of centre; and no vision pierces further! The Brain seems to be an admirable instrument for receiving and registering impressions from the outer world. I can conceive, too, that the stored energy laid up in its centres manifests itself as thought, will, and feeling, under the law of the correlation of forces; but I nowhere find the something you seem pleased to call the Soul!"

Says the Spiritualist, with a fine affectation of scorn, with no scalpel, microscope, or brain before him; evolving his answer from his inner consciousness: "Do you hope to find, in dull, dead matter, Spirit, Mind, Soul? Why waste your time in a fruitless search for what you can never apprehend through the senses? Besides, it is a dead house you are searching through for its late occupant! Did you ever

search through a living, pulsating, inhabited brain? Higher than all your search is the evidence of the rational deductions founded in the eternal justness and fitness of things; that deep, central current of belief in Immortality which sweeps through human thought as the Gulf Stream through the ocean, bankless and shoreless.”¹

At the present halt of Science, the Soul, to a Materialist, if he should give it a name, is the function of a highly specialized form of matter, the nervous mass. Said *Le-fèvre*: “Soul is the function of the cerebral mass, concentrating itself in memory, thought, and personality.”

To the Spiritualist, Soul is another thing than matter: it is an entity, living and imperishable! The nervous organization, as all material parts of the organism, is admittedly perishable as structure; but the conscious self that controls the body, the inner force, must persist. In fact, advanced spiritualism declares that matter is the shadow of which Spirit is the substance.

It seems certain that the present hostility — largely apparent — of Science to the immanence of Soul, both in the Universe and in man, is to lead to a broader philosophy, a philosophy which shall reconcile all the varied phenomena which Nature presents to the human mind.

And this new and better philosophy will assuredly have for its basis the deepest, widest, and most certain of all truths; that the Power that is behind this apparent veil, the Universe, and the power that is behind this veil of flesh, the human body, can only be made known by stirrings behind the tapestry of matter.

¹ The thought of James Freeman Clarke, spoken at Concord, Mass., at the funeral services of Emerson, the Plato of our era. Mr. Clarke said of this great soul: “Like the greatest thinkers, he did not rely on logical proof, but on the higher evidence of universal instincts; the vast streams of belief, which flow through human thought like currents in the ocean, — those shoreless rivers which forever roll along their paths in the Atlantic and Pacific, not restrained by banks, but guided by the revolutions of the globe and the attractions of the sun.”

We have made this general survey of the relations of the Soul to its environment — both near and remote — that the student may be better prepared to comprehend something of the breadth and significance of what I think I may claim to be *A New Philosophy of Expression*. It will be seen that in its broadest application such a Philosophy must embrace all the phenomena resulting from the mysterious union of soul and body.

It must recognize the action of the environment — near and remote — upon the soul, as also the modes of reaction of the soul upon its environment.

It should trace — if it were pushed to ultimate grounds — the manifestations of the simplest life upon the earth, up to imperial man, whose expressions would epitomize and reveal the Kosmos.

It must embrace, also, all the complex phenomena which arise from the necessity man feels, while in the presence of Nature, to embody, and thereby attempt to realize, his worship of the True, the Good, and the Beautiful. Hence a complete Philosophy of Expression would embrace the philosophy of the Fine Arts, plastic, graphic, and dramatic — the Arts of the eye and ear.¹

¹ Oken has made a twofold division of Art; the Plastic and the Sonant, or that of Form and that of Motion. Sculpture is mass in Form. Sculpture repeated in light is Painting. Music is the Art of

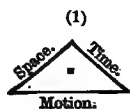
In the present treatise upon Human Expression, we shall discuss, mainly, the immediate expressions of the soul through the body. We shall attempt to show that the soul manifests itself as a threefold essence; through three divisions of the body; and by three modes of motion.

One great principle will be stated as foundation for much the greater number of our expressions.

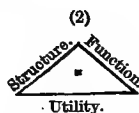
This principle is the Law of Correspondence. It will be fully stated when we come to consider the Nine Laws of Gesture.

Two diagrams will have greater and greater significance as our work unfolds. Indeed, they may be said to centre our Philosophy. The student will come to regard them as keys to unlock many a difficult door.

We present here the two diagrams, and urge the student to turn back and to refer to them again and again as he proceeds.



EXPRESSION.



EXPRESSION.

(i.) The student will refer to page 6 for an explanation of Diagram (1). This diagram represents the broadest restriction man encounters upon the earth. It will be shown, as we proceed, that all our expressions are related to these three great restrictions of Space, Time, and Motion.

Motion. The dance of Tones is Music. The Sonant Arts, rooted in Music, are Poetry, Oratory, Reading. Dramatic Art is living Sculpture, with an environment of all the Fine Arts.

Diagram (2) is explained at the commencement of Chapter VI., in which, and the chapters following, we have stated the grounds of our belief that the evolution of man as an expressive being has been a progressive development along the three parallels of Structure, Function, and Utility.

In our discussion of the great subject of Human Expression, we shall hope to present to the reason and judgment of earnest students proof and confirmation that man is indeed an abstract and epitome of the forms and forces of the Universe, and that the poet sang only prosaic truth in her sublime utterance : —

. . . "God collected and resumed in man
The firmaments, the strata, and the lights,
Fish, fowl, and beast, and insect, — all their trains
Of various life caught back upon his arm,
Reorganized and constituted man,
The Microcosm, the adding-up of works !"

ELIZABETH BARRETT BROWNING.

CHAPTER II.

THE THREE CONDITIONS OF BEING. THE THREE
SPECIAL AGENTS OF EXPRESSION. THE THREE
MODES OF MOTION.

MAN as Psychic¹ manifests himself as three conditions of Being, or, we may say, he manifests three Natures.

These conditions of Being, or three Natures, are: I. The Vital. II. The Mental. III. The Emotive.

(a.) It should be borne constantly in mind that in dealing with the Psychic we are considering an organic whole. Nature makes no division of the psychic element, and any process by which we break it up into parts is an operation purely of our own making, and is used simply as a convenience. In the somewhat abstract discussion which follows, the reader will save himself from confusion by keeping this idea in mind.

I. *Man as a psychic Being is Vital, Sensitive, Instinctive.*

Through this part of his Being he exhibits the phenomena of Life.

¹ As we shall frequently use the term Psychic, as a noun, in our treatise, let us define it as an energy centred in the organism and controlling its action. The term is used as generic, and covers the three specific terms, Life, Mind, and Soul.

(b.) We nowhere find sentient life, save in connection with a highly organized kind of matter which we call nerve substance. A dot of this substance not so large as a pin's head organizes an insect kingdom. Said Darwin: "The brain of an ant is one of the most marvellous atoms of matter in the world, — perhaps more so than the brain of a man."

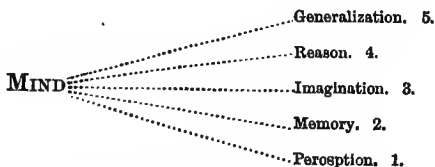
Stated in terms of matter, Life is an energy centred in nerve substance, and nowhere exists save in connection with such substance.

This is true alike of the structureless protozoa¹ inhabiting a stagnant pool, and of man who is at the summit of neural development.

II. *Man as a psychic Being is Mental, Intellectual, Reflective. Through this part of his Being he exhibits the phenomena of Mind.*

He thinks, and compares his thoughts with things. He perceives, recalls what he has perceived, and projects pictures of what he has seen. He reasons, and links his reasonings in propositions. He is the only being on earth who uses the syllogism.

(c.) We may diagram the pentarchy of the intellectual faculties.



These are the faculties by the aid of which man attains to all knowledge. They are the instruments with which he

¹ Since the passing from a structureless state to a structural state is itself a vital process, it follows that vital activity must have existed while there was yet no structure. — HERBERT SPENCER.

constructs his science, art, and literature. And in the last analysis we shall find that our sciences are but human knowledge, partly unified, based upon the power of detecting identity and difference in the phenomena which Nature presents to the *knowing* faculties.

III. *Man as a psychic Being is Emotive, Passional, Ethical, Spiritual.*

Through this part of his being he exhibits the phenomena of the Emotions. He loves and hates, is affectionate, or bears enmity. He is benevolent, or malignant. He is loyal to his concepts of truth and duty. He worships; and, contemplative of the Spiritual, is reverent even to mysticism.

These are three states or conditions of one Being. Neither state exists without the others, nor independently of the others, any more than a triangle can exist without three sides.

Separate the terms by which you state a three-fold essence, — you cannot separate the essence; nor can you know of the existence of the Being except through its manifestations.

We repeat, then, the idea which we shall attempt to unfold in the pages of this treatise.

The Philosophy of the manifestations of the Psychic through the Body is the Philosophy of Human Expression.

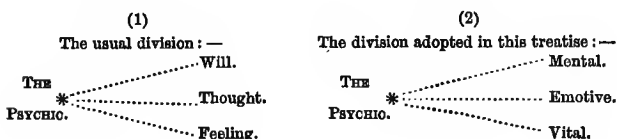
(d.) The question has occurred, doubtless, to the student, Does scientific Psychology justify this division of the Psychic in man into Vital, Emotive, and Mental states or conditions?

We think so. The division of the psychic element, made

by the old psychologists, into Intellect, Feeling, and Will, is held substantially to-day.

Says Sully :¹ " Mind is the sum of our processes of knowing, of our feelings of pleasure and pain, and of our voluntary doings. It is non-material, the inner world as distinguished from the external." Says Hermann Lotze :² " Sensations, ideas, feelings, and acts of will constitute the well-known facts, the whole of which we are accustomed to designate as the life of a *peculiar entity* called ' The Soul.' "

We diagram the two divisions of the Psychic.



It will be seen that the Will is not found in our division of the Psychic. True, but it is not left out of our scheme.

This determining power of the Psychic — this power by whose aid our Mental, Emotive, or Vital states declare themselves — we make the direct agent of the Psychic.

So we accept the empirical definition, accredited to Delsarte as that which best explains the phenomena of the Being in action.

The Will is the direct agent of the Soul, and lends itself to which side of the Being desires to manifest.

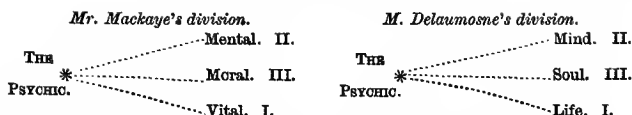
We are aware that Delsarte is accredited with making a threefold division differing from that which we have presented.

It becomes necessary, therefore, that we shall state the grounds of difference and the reasons for our dissent.

We present the division accredited to Delsarte by two of his disciples.

¹ See Sully's *Psychology*, pp. 2, 20. Appleton & Co., New York.

² See Lotze's *Outlines of Psychology*, p. 1. Ginn & Co., Boston.



- Now we consider the use of the term "Moral" to represent a generic division of the Psychic as in the highest degree unfortunate. We have found it confusing. No one of the followers of Delsarte, so far as we know, has yet given it a comprehensible definition. It manifestly cannot bear its ordinary English meaning, of reference to our sense of right and wrong, for that so restricts its signification that it is impossible to cover what, by numerous examples, Delsarte evidently intended to cover with the term.

Thus what confusion this statement, accredited to Mr. Steele Mackaye,¹ makes in any scheme of psychology!

"In man we find a Vital nature which feels, a Mental nature which thinks, and a Moral nature which 'loves.'" But suppose we write "hates" in the place of loves? Does the action cease to be "moral," according to the definition? But has the term "Moral" no place in our scheme? Yes; with us "Moral" is a specific term, included in the generic term Emotive.

We think no one can read the definition of Feeling as given by Herbert Spencer without recognizing the probability that by the term "Moral" Delsarte intended to cover the entire class of Feelings which Mr. Spencer classes as Emotions.

He divides all Feelings into two classes, — Sensations and Emotions.

Sensations are Feelings arising in the bodily framework.

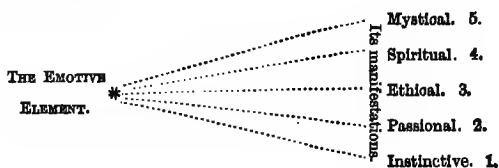
Emotions are Feelings arising in the mental framework.

In this treatise we have adopted in place of the term "Moral," accredited to Delsarte, the more consistent term

¹ It will be borne in mind by the reader that *authoritative* statements do not exist of the ideas either of Delsarte or Mr. Mackaye. We therefore use the compliant term "accredited" when referring to statements afloat in their names.

Emotive. By so doing the terms Vital and Emotive can be held in entire consistency with modern Psychology.¹

Let us diagram our idea of the Emotive nature. It will be seen that we make the Ethical (moral) a division of the Emotive nature.



Our contention is, that the Being of man, though invisible, manifests itself through the body in three modes or phases. These modes of manifestation are well defined. Thus, Vital expressions, as we shall attempt to show, bear a distinct character that separates them from Emotive expressions. So, too, expressions from the Mental nature have certain distinct characteristics which separate them from either Vital or Emotive expressions.

And more than this; we contend that each of the three natures chooses the ground of its display, and that the body has its well-defined tracts, through which, by a seeming preference, the Unity

¹ To show that a mind used to psychological methods would gather a similar impression of the term "Moral" to that presented by us, we quote a definition given before the Summer Session of 1885 of the Boston School of Oratory, by Professor Bulkley, of the Howard University, Washington, D. C. He thus presents what he concludes to be Delsarte's idea in the use of the term "Moral:"—

The combined intellective and motive forces, leading to the conviction under which, by will power, the orator speaks and acts.

This definition includes the three fundamental factors of the Being, namely: The Intellectual, The Emotional, The Volitional.

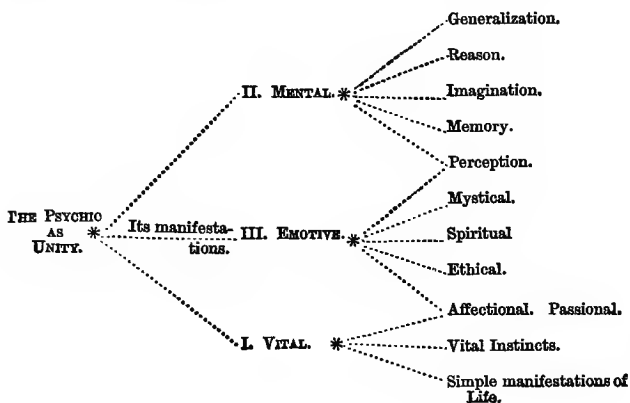
we call the Human Soul manifests itself in one of its three phases of Being.

Thus, expressions amount to proofs, and so we are enabled to trace backward from the outer expression to find the inner condition that prompted the expression. Thus the outer sign reveals the inner mood.

(e.) Let us illustrate. Both Darwin and Mantegazza, from a wide survey of Human Expression, embracing all races now upon the earth, agree that menace or threatening to attack shows itself the world over by two expressions sent out from the Vital nature: (1.) By making fists. (2.) By a firm closure of the mouth, and by drawing up the lips from the teeth, usually on the left side.

We shall give proof upon proof that, back of these open manifestations, lurks the phase of the Being that prompts the expression.

We ask the student to study carefully the following diagram of the classification of the Three States of the Being:—



(f.) Our diagram is intended to represent all sentient life upon the earth, from the simplest protozoa to man. Surveying psychic appearance in animals along the chain of sentient existence, it seems apparent that it is the added psychic element that marks higher and higher degrees of intelligence and feeling, from the simplest manifestations of Life, up to the complexity of Thought, Feeling, and Will, which we call the human Soul.

We formulate, in a single proposition, the mode of the existence of the human Soul upon the earth.

*The human Psychic is one in Consciousness.
It is three in Manifestation.*

(g.) Can this formula be justified? Let us see. Close your eyes, kind reader, and ask yourself the question, "How many am I?"

You will never get other answer than the declaration of the oneness of the Ego, "I am I." Nor has Philosophy on this side of the question advanced a single step since the days of Aristotle. If you should interrogate the Ego at intervals of ten, twenty, sixty years, the same answer would come back out of the deeps of your consciousness, "One Being in the midst of many changes!"

We thus arrive at the most central fact in human experience, that *the Soul is one in consciousness.*

Let us examine the second part of our proposition. "*It is three in Manifestation.*"

One day you are sick, and are tossing uneasily upon your pillow. The nurse brings to your bedside a bouquet of flowers. You turn your head and open your eyes. "They are beautiful!" you say, with the intoned voice almost of song. Their perfume reaches you. "Exquisite!" you exclaim. "Let me hold them in my hands!" And you comment upon their arrangement, form, and color. And now you say, "Who could have sent them, and arranged with so much taste, too?"

“Ah! here is a letter!” You open it and glance at the writing; tears fill your eyes, there is a choking at the throat. “How kind and thoughtful!” you exclaim.

Now, note the significant order of your action. You first heard the nurse’s step and voice. You turned your head and saw the flowers. Then their perfume greeted you. Then you spoke with an intoned voice. Such were your sensations. Such, too, your emotions, stimulated by your sensations.

At the same time that these feelings were aroused, you took note of the various objects surrounding you. When you spoke of the arrangement, form, and color of the composite whole presented you in the bouquet, you used discriminating words. If you had gone on to note accurately resemblances or differences of structure, the mental nature would have prompted you to use words of scientific import.

And what a complex of Vital, Emotive, and Mental struggled for supremacy, when you read the letter. Memory ran on a swift errand to hunt for the sender of the flowers. Imagination drew a heightened picture of the form, face, and voice of the sender. You were reading on, when the unexpected happened. A single phrase of the letter caught your eye, and a torrent of feeling—how different from thought!—flooded out from your psychic centre. Such were the manifestations of that marvelous entity, dwelling within its tabernacle of flesh!

Now, ask yourself, was it the same Being that gave forth these diverse phenomena?

The illustration we have just given, if thought upon, will convince the student that these three phases or states of the Being seldom appear in any expression as single, separate, and distinct, so that we may find no trace of the others.

Mantegazza has well stated this point: “It rarely happens that an emotion is expressed as a simple state. It is more often a binary, or even a threefold combination.”¹

¹ *La Physionomie et l'Expression des Sentiments.* Par P. Mantegazza. Paris.

We confidently state, as a practical conclusion which any one may verify, either by reflecting upon his own states, or by observing others' moods, that *in the expression of any given passion, one of the three states of the Being leads, while the other two assist.* In most of our expressions it is quite easy to detect blends or composites of the three Primary States.

These considerations, doubtless, led Delsarte to a constant and critical observation of all the phenomena of the Psychic as exhibited in the every-day gestures, tones, and speech of people about him.

Delsarte is reported to have formulated, in synthetic tables, the expressions of each agent. Thus the gestures of the head, torso, hand, face, eye, were put into synthetic tables, and these tables were called "the nine squares."

(g.) There can be little doubt that Delsarte held a form of transcendental philosophy which had hardly crystallized, at the time of his death, into logical statement. We have direct evidence that he thought it somehow possible to reduce all the phenomena of Expression to the rule of Law; and that the hidden laws of Expression had a definite agreement with the idea of the Trinity. Hence the synthetic tables of threes and multiples of three. In support of our hypothesis we quote the words of two of his intimate students.

Angelique Arnaud¹ says: "The principle of the Delsarte system lies in the statement that there is in the world a universal formula which may be applied to all sciences, to all things possible. This formula is *The Trinity*."

¹ See *The Art of Oratory, System of Delsarte*. By Edgar S. Werner. Albany, N. Y.

And Delaumosne : " All phenomena, spiritual as well as material, must be considered under three or nine aspects, or not be understood."

We reproduce one of " the Nine Squares " as given by Delaumosne.

CRITERION OF THE STATES OF THE BEING.

DELAUMOSNE.¹

State of the Being as Primary, or Genus.	Derivatives, Species, or Blends.		
	1.	3.	2.
II. Mental.	1-II. Vito-Mental.	3-II. Emoto-Mental.	2-II. Mento-Mental.
III. Emotive.	1-III. Vito-Emotive.	3-III. Emoto-Emotive.	2-III. Mento-Emotive.
I. Vital.	1-I. Vito-Vital.	3-I. Emoto-Vital.	2-I. Mento-Vital.

The vertical columns are for species, derivatives, or blends.

The horizontal planes are for the genus, or primary.

The name that marks the species comes first. It is the adjective.

The name that marks the genus comes last. It is the noun. It may have before it one or two adjectives expressing " blends."

In the middle horizontal plane, we place the

¹ This table agrees with Delaumosne, except that the author has used the term " Emotive " in place of " Moral," for reasons already stated.

Emotive genus. In the middle vertical column the Emotive species.

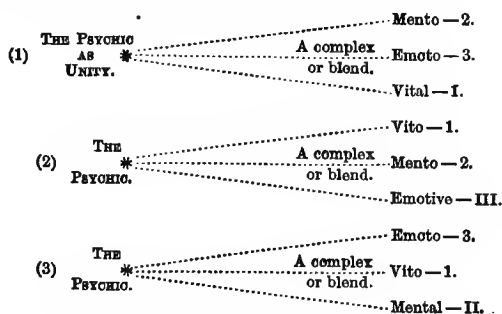
(h.) The student will note that in the left vertical column are found the three Primary states of the Being, — The Mental, Emotive, and Vital, — marked with the Roman numerals II., III., I.

At the right of this column are the Nine Squares, each square presenting a “blend,” or “composite,” consisting of two elements: a primary state as the noun, and a secondary, or assisting state, as the adjective.

These secondary states are marked with the Arabic figures 1, 3, 2, and are read as 1, Vito; 3, Emoto; 2, Mento.

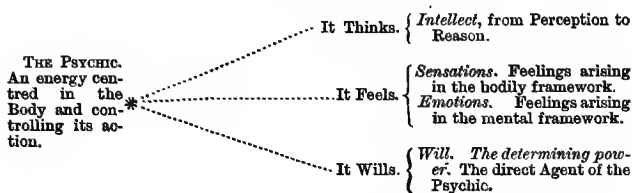
It will be readily seen that triple blends can be put into each of these squares. Such blends would represent complex psychic states, such as every human being has again and again experienced.

We diagram three triads of composite states; each of the three states, in turn, being primary. Let the student remember that these diagrams are only convenient forms for representing the *indivisible* Unity, the Soul.



We again quote Mantegazza: “An emotion is seldom expressed as a simple state. It is more often a binary, or even a threefold combination.”

That the student may more fully realize that our division of the Psychic in man does not differ in any essential point from the conclusions of modern psychology, we present a diagram, to which we ask serious attention : —



One other statement seems necessary to a clear comprehension of the meaning of certain forms of Gesture, which will be presented further on in our treatise.

The Psychic in man exists in two conditions in relation to its environment.

1. As Active. 2. As Passive.

This difference is incorporated in the nervous system.

Connected with the Passive side of our nature are the organs and faculties of sight, hearing, taste, smell, touch, and organic sensibility generally. This side of our nature is receptive.

Connected with the Active side are the muscular system and the nerves which govern it. Thus with the sense organs and skin is allied our Passive, or Receptive nature. And with the muscles is allied our Active nature.

It will be found that these two conditions of

the Psychic, incorporated in the physical structure, determine the form and direction of all our gestures.

Having stated our psychological grounds with what clearness we have found possible, we come to the practical question, How does the Psychic manifest itself? We ask the student's thoughtful attention to our answer.

Man manifests the three states of the Being through :

1. *The body as a whole.*
2. *Through its divisions, tracts, or zones.*
3. *Through three special organs, which are the three special agents of the three states of the Psychic.*

These special organs are : —

I. *The Phonetic.* III. *The Muscular.* And II. *The Articulatory.*

I. *The Phonetic manifests more completely the Vital state of the Being.*

III. *The Muscular manifests more completely the Emotive state of the Being.*

II. *The Articulatory manifests more completely the Mental state of the Being.*

Yet each of these special organs manifests in greater or less degree the other states. Each is special. Each is also general.

Let us consider these agents in detail : —

The Phonetic organ is that instrument which gives forth sound, voice, and modulations of voice.

It is Nature's instrument for manifesting to the ear the Life element of the Being.

It is a tone instrument, and spontaneously gives forth the fundamental tones of the musical scale.

Music grew into Art as this instrument became more and more differentiated from the breathing-tube of the mammals. And the ear kept pace with the differentiated trachea.

So, no hearing, no speech. No discriminating ear, no artist in song or speech. The congenite deaf are also dumb. The bird is Nature's symbol of tone. It is materialized hearing and song.

Man, through his physical structure, is of the class Mammalia. All mammals give voice to the Life within them, and thus disclose their natures.

The flesh-eating mammals, the lion, the tiger, the wolf, give forth an aggressive, forceful, and vital voice, in the major key, which corresponds with actions of seizing, holding, and tearing prey.

The herbivora utter plaintive and unaggressive tones, mainly in the minor key, which correspond with their peaceful intent, and which carry an appeal to our sympathies.

The voice of man, with its varying sounds, is a synthesis of the voices of all the animals.

His larynx is the last step of differentiation in

an animal breathing-tube. So the Vital nature of man finds its primary agent for its expression in the Phonetic organ.

(i.) The babe is an epitome of the human race. His unfolding symbolizes its advance.

The babe reflects the passive Vital nature, with latent Emotive and Mental.

As baby lies in the cradle, it is only a step in advance of a lump of protoplasm.

It is merely an organized possibility.

It lives. It is the race symbol of the Vital, and the helpless Vital. It neither thinks, nor loves, nor hates. Its Emotive and Mental natures are embryonic. It is sensitive, because it is an animal organism.

So it can best illustrate the first law of Life, imposed upon it at birth, which is Want.

The cry it uttered when it entered the world was the cry of organic Want, which was satisfied when the air filled its lungs.

Born a subject into the kingdom of Want, it will from this time forth begin to group all its sensations into two classes. Those of Pleasure, when Want is satisfied; and of Pain, when Want is answered by denial. These sensations centre its Vital nature. It puts them into cries, wails, and reflex motions. The great poet of insight and rhythm voices the cry of the helpless Vital of the new-born babe:—

“What am I?
An infant crying in the night:
An infant crying for a light:
And with no language but a cry.”

TENNYSON.

The second special organ of manifestation is the Muscular apparatus.

Through muscles all movements of the human body are made.

Without muscle in motion, no expression is possible.

In the last analysis, all expression is muscle in motion.

The problem in gesture is how to present form and to move muscle in accordance with æsthetic law.

We shall find that the muscles, more especially of the face, as civilization has advanced, have differentiated in a marked manner from the Vital type to serve the Emotive nature of man. So the muscular play that served the coarse animal sensations of primitive man has, to-day, become the facile agent of the Emotive nature.

(j.) We found that the babe gave expression to its organic sensations of pleasure and pain by the cry, the wail, and spontaneous motions.

This was the first stage of its Being. When there began to stir within it a psychic movement of blend d Sensation and Emotion, by which it dimly and obscurely recognized its mother's caress, it smiled.

The child has now advanced to the second stage of its Being. It adds now the smile and frown to the cry and wail. It does not think yet. Its psychic state may be described as nebulous and chaotic. Its open stare into the face of existence, the spontaneous play of its fingers and toes, show plainly that it has not yet been able to separate itself from objects surrounding it, nor its body from itself.

But baby *feels* ; and it is a higher kind of feeling than that which prompted the cry and the wail. From this time forward, feelings arising in the mental framework will more and more struggle to express themselves.

As the affectional nature is aroused by its mother's smile and voice, it springs, and caresses with its little hands, crows

its content, and jubilates with the first rudiments of the intoned voice.

Now, too, it makes tentative efforts to combine the two languages, that of the voice and that of the gesture.

With a serious impartiality it smiles at, and reaches for, the moon, seen through the window ; or babbles its content at the red flames in the grate ; or beats the cradle with papa's watch or the tin soldier ; and rejoices its whole being with the incipient rhythm of immense musical promise, in the dance of sound which it pulses out from the discordant rattle.

The third special organ of manifestation is the Articulatory Apparatus.

The action of the articulatory apparatus gives, as its product, speech.

As by the differentiation of the breathing-tube, common to all mammals, man attained to a superior organ of voice, so the differentiation of the mouth cavity and its contained organs gave him the instrument of articulate language.

This is the special organ of the Mental Being ; the last structural differentiation, both in the individual and in the race.

Through the action of this agent, man can put a sound in the place of a thing and so not need to present the thing. By recording these sounds, he can make all the past become present and now. It is greatly significant that the Greek language has but one word for language and reason ; for what is a man's word but his reason coming forth to behold itself ?

(k.) The child has now reached the third and last stage of its development. To manifestations of the Vital and Emotive natures he now adds those of the Mental. He now *thinks*, feels, and lives. What he cannot say by cries and gestures, he begins to say by jointed sounds, as signs of things. The flame that was to him an unnamed sensation of sight is now "red."

The planet is "moon;" the aggregate of form, fur, and "meow" is now "cat."

And before long, when he wants to say five or seven things about the fire, moon, or cat, or about mother, book, or school, he puts two or more of the things into words.

Soon he will prefigure in sentences what he thinks, with much that he wills and feels.

Take away the faculty of language, and he will inevitably revert to the Vital. He will go back to animal cries and gestures.

Said Noire: "When there was no language there was no reason."

And now occurs the question: By what means does the body, with its separate divisions and its specialized organs, manifest this threefold Being, speak this threefold language?

The answer to this question discloses the centre and core of the Synthetic Philosophy of Expression.

What Inflections are in the system of Walker, what Stress in the system of Rush, is Delsarte's formula in the New Philosophy of Expression.

This formula is central, in all human expression, and bears the force of law.

Law: The three States of the Psychic manifest through the body and its zones by three Modes of Motion.

These three modes of motion are: I. Eccentric, or Centrifugal. II. Concentric, or Centripetal. And III. Poise; or Centred motion.

Eccentric motion is motion from a centre outwards; Concentric, towards a centre, inwards; and Poise is centred, or balanced, motion.

That the human Psychic and its body come under the sway and rule of the cosmic laws that govern all the masses of matter of the universe; and that it also centres in and controls its own mass, and moves outwards from, or inwards towards, or poises at, its own centre, is Delsarte's great discovery.

(L.) We can credit a saying of Delsarte, reported by a student of the great teacher: —

“In this world there are two centres, towards which and from which everything tends. These are: —

“1. The centre of gravity, immediately of the earth; remotely of the universe.

“2. The human centre found within ourselves, the centre of the Being or Ego.”

To which we add: 3. The spiritual centre, out from which and into which flow all existences. Of which centre the material universe is the body; itself is sustaining cause and continuance.

Thus it is through motion, and only through motion, that the Psychic makes itself known. Through motion the unseen is seen. Broadly speaking, our Vital states express themselves as Eccentric motion; our Mental states as Concentric motion; our Emotive states as Eccentric or Concentric, according to the nature of

the emotion. And the Poise of the Being (namely, the equilibrium or balance of Vital, Emotive, and Mental) tends to express itself by motion held at rest; that is to say, by a centred or poised external.

Let us put our conclusions into a proposition which carries the force of law.

In all organisms, simplest or most complex, motion is manifestation; at the base Life, at the summit Soul.

(*m.*) See how true this is! We all use the phrase, "Where there is motion there is Life." This is our simple test, and every one applies the logic of common sense, and abides by the result.

Thus, for example, we are walking along the seashore; we find on the beach a crab. Is it alive? one asks. Poke it with your cane and see! Yes; it reacts. It is alive.

So we can construct the chain of Being from the monera to man.

In all sentient organisms motion is manifestation. In the lowest animals, motion is evidence of the simplest condition of Life. In the higher animals, motion is evidence of a complex condition. In the highest animals, nearest man, as the dog and horse, motion is evidence of a still further complex condition of the Psychic. In man, motion is evidence of the highest complexity attained by any animal upon the earth.

Now we find that through the entire chain of sentient life, until we reach man, the only mode of motion which any animal can consciously use is the eccentric, which manifests the Vital nature. Man alone — a fact of vast significance — consciously commands the three modes, the Eccentric, Concentric, and Poise.¹

The Emotive nature, variously described by

¹ It will be noted that the terms descriptive of Motion, Eccentric,

the disciples of Delsarte as "Moral," "Affective," "Spiritual," "Mystic," and like terms, exists in man in two conditions: 1. As Active Emotive. 2. As Receptive Emotive. This difference is incorporated in the nervous system, and it is because of this difference that the Emotive nature sometimes expresses itself through either of the three forms of motion.

We may say, broadly, that active emotions, which ally themselves with the Vital nature, declare themselves by eccentric motions, while the reflective emotions, which ally themselves with the Mental nature, declare themselves by concentric motions.

The structure and function of the nervous system bear out our statement.

The nervous system reaches out with its white threads towards its environment. It receives impressions from the outer world. These impressions travel inwards along the nerve lines. At the great neural centre, the brain, they are received, correlated, and coördinated. Now if the impressions received lead to reflection, to turning over and over in the mind what is received, the

Concentric, and Poise, are identical with Centrifugal, Centripetal, and Centred or Motion held in balance.

As these last terms have already been adopted as scientific usage, it is an open question whether it would not be better to use them in the nomenclature of Expression. Another consideration favors the use of well-known and recognized terms, namely, the absolute necessity we are under, in these days of research, when all theories are sifted as never before, to present a logical and consistent body of truth, if we would claim a place among the recognized sciences for this latest child of the Soul — the Science of Human Expression.

gestures accompanying these psychic states would be mainly concentric.

Thus, emotions of Grief, if dwelt upon, endured, suffered, would lead to gestures with concentric motion. But suppose Grief to be accompanied with the idea of wrong or injustice; the gestures, expressive of the active state, would take on Vital forms and become eccentric.

But suppose the events causing the emotion are thought upon, passed through the various mental processes, and, moreover, that this thinking is submitted to conscience and to the higher reason; the gestures indicating this complexity of thought and emotion would take on balanced or poised forms, — the most expressive forms that the body or its agents can present.

What a wonderful complexity of psychic states is revealed by these lines from Shakespeare's King John, giving us mainly Mental and Emotive composites of Grief : —

“Grief fills the room up of my absent child,
Lies in his bed, walks up and down with me,
Puts on his pretty looks, repeats his words,
Remembers me of all his gracious parts,
Stuffs out his vacant garments with his form.”

Here the reflective states suggest concentric gestures.

Let us formulate the Law of Motion as revealing inner states of the Being.

Law : I. The Vital nature tends to express itself through eccentric motion.

II. The Mental nature stills or renders qui-

escent the body, and tends to express itself through concentric motion.

III. *The Emotive nature reflects both the Vital and Mental natures; hence, uses both their forms of motion. Thus, our highest Emotive states manifest themselves through poise.*

When the Being is at its best, and the three natures act in accord to further some great idea, practical, ethical, or spiritual, it always tends to express itself through poise or balance of motion.

(n.) Feeling and Thought are the opposite poles of our psychic states. In such broad contrast are they that they mutually exclude each other in extreme manifestations.

As every one knows who has experienced these states at their strongest, intense feeling excludes thinking; intense thinking excludes feeling.

Hence, the normal condition for clear thinking is the quiescence of feeling; and it is well known that interest in another's welfare, partisanship, affection, are each and all the enemies of a judicial frame of mind.

Let us epitomize the Law of Motion of the three natures. *The Vital moves the body, the Mental arrests and stills it, the Emotive poises it.*

Take an illustration: It is related of Socrates that he was observed by his friends in the early morning facing the east and looking intently into the blue ether. He was let alone. At noon he was still there. Not a muscle was in motion. Men said, "Will he never come in?" At night he was there, motionless as a statue of Phidias. Then his friends took their stations and watched. Through the long night he stood, still peering into the east, and startling the stars. As the sun arose he dropped his eyes. His body took on its

life again. Drawing up the figure into enlarged form, and looking around, "The problem is solved!" he said, and strode away.

We present Delaumosne's Criterion of the Three Modes of Motion.

CRITERION OF THE THREE MODES OF MOTION.

DELAUMOSNE.¹

Mode of Motion, as Primary or Genus.	Derivatives, Species, or Blends.		
	1.	3.	2.
II. Concentrio.	1-II. Eccentro-Concentrio.	3-II. Poise-Concentric.	2-II. Concentro-Concentric.
III. Poise.	1-III. Eccentro-Poise.	3-III. Poise-Poise.	2-III. Concentro-Poise.
I. Eccentric..	1-I. Eccentro-Eccentric.	3-I. Poise-Eccentric.	2-I. Concentro-Eccentric.

The vertical columns are for species, derivatives, or blends.

The horizontal planes are for the genus or primary.

The name that marks the species comes first; it is the adjective. The name that marks the genus comes last; it is the noun.

In the middle horizontal plane we place the Emotive genus; in the middle vertical column, the Emotive species.

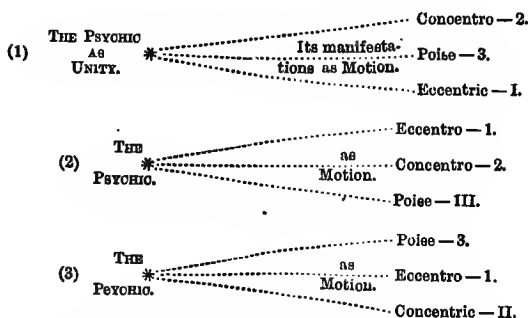
¹ This synthetic table agrees with Delaumosne, except that the author has used the term "Poise" instead of "Normal."

(o.) Delaumosne's table presents double blends of motion. The student will note that in the left vertical column are found the three primary modes of motion, — the Eccentric, Poise, and Concentric, — marked with the Roman numerals I., III., II.

At the right of this column are the Nine Squares, each square presenting a "blend" or "composite," consisting of two elements, — a primary as the noun, and a secondary or assisting mode of motion as the adjective.

These assisting modes of motion are marked with the Arabic figures, — 1. Eccentric. 3. Poise. 2. Concentric.

We diagram three triads of composite modes of motion, each of the three modes in turn being Primary.



We have thus far attempted to establish the truth of the following propositions: —

I. *The source of all manifestation, both in the Universe and in its epitome, Man, is Essence, Spirit, or Soul.*

There is and can be no manifestation that has not for its cause Essence, Spirit, or Psychic.

II. *That through or by which the Psychic, whether Infinite or finite, manifests itself is body, apparition, or phenomenon.*

III. *The mode of manifestation of the Psychic, whether in the Universe or in man, is through Motion.*

There are three modes of Motion by which all manifestation is made apparent. These three modes are Eccentric, Concentric, and Poise. And the mode of Motion (Outer) discloses the state of Being (Inner).

(L.) Whatever may be the real, substantial truth or verity, as apprehended by any higher intelligence than man, of the problem presented by the Universe, the simple fact remains that it is impossible to conceive a Kosmos where blind, unconscious matter evolves out of itself, by its own potency, the phenomena of mind.

Human logic as irresistibly leaps to the conclusion that God is centre and soul of the Universe, as that man is centre and soul of his own organism.

And this is the conclusion of the greatest English philosophic thinker. Mr. Herbert Spencer says: "The laws of Nature are the modes of action of the Unknowable." And Goethe put the same thought into poetic phrase when he said: "Nature is the garment thou seest Him by!"

How this comes about is quite another matter. That no man has seen God is not so very strange; for no man has seen *man*.

Show me a soul outside the body, and we may hope to see with mortal eyes the Soul outside the Kosmos!

No matter, let me again urge, no matter what the *real nature* of the phenomena of the Universe, as known to higher intelligences — our limitations inexorably shut us in to the conclusion that a spiritual essence is behind all phenomena, both of the Universe and of man.

The Philosophy of Expression, then, is the Philosophy of Manifestation.

In its broadest sense it is the Philosophy of the Infinite, as revealed in the Universe.

In its restricted sense it is the Philosophy of Man, as revealed through the Organism.

CHAPTER III.

THE THREEFOLD DIVISION OF THE BODY IN
EXPRESSION. — THE LAWS OF GESTURE. —
DELSARTE'S DIVISION INTO NINE. — THEIR
TRUE BASIS.

DELSARTE is reported to have made a threefold division of the body to correspond with the threefold division of the Psychic. He divided the exterior into: (1.) the Head; (2.) the Torso; (3.) the Limbs. These segments he called "Agents of the Soul." And not only is the body, as a whole, expressive of the Psychic; but to each division of the body is delegated the office of *special* manifestation. Thus we may indicate broadly the office in expression of the segments.

I. *The Vital nature predominates in the Limbs, and is manifested through their activities.*

"No grass grows under his feet," we say of the active, Vital man.

The Romans put wings on the feet of Mercury, the swift messenger of the gods.

III. *The Emotive nature is manifested through gesture and form of the Torso.*

This segment of the body contains the heart and lungs, the central organs of the blood and breath. Our most acute pains come from any disturbance of their action.

So in our subjective states, in great accesses of passion, the torso writhes and rocks.

II. *The Mental nature manifests itself through gesture and form of the Head.*

(a.) It is not without reason, as we shall hope abundantly to show, that we commonly speak of the heart as the seat of the Emotions, and the head as the seat of the Intellect.

When it shall be found that all races of men make substantially the same gestures to express ruling psychic states, these gestures must have a deeper reason than imitation or convention.

Again, the limbs are levers and sustain motion. The head guides; the torso impels. The legs show Vital health and strength, or the reverse; the arms, Mental health and strength. Into the fingers we put Mental sensitiveness and finesse. We bite our nails in reverie or vexation, and we use the tips of our fingers when we would illustrate fine Mental distinctions, or urge nice critical points.

Thus the whole body and each of its divisions become revelations to him who can read their language.

(b.) Not only did Delsarte make this threefold division of the exterior to express the three states of the Being, but each of these divisions was subdivided. Thus the head, torso, and limbs each have zones or tracts where the Psychic seems, by preference, to manifest itself as Vital, Mental, or Emotive.

We shall attempt to show that the existence of such zones or tracts of the expressive regions of the head, face, torso, and hand is proven by the significance of the gestures of these several agents.

And we think it will be seen that a material body is an absolute necessity under the conditions imposed by its environment upon the Soul. Were the roadways between souls open avenues, there would be no protection for the personality. Through the body, the individual soul holds itself apart from other souls, and so maintains its independence and integrity. Through the body, it both declares its sympathy and masks its antipathies.

In a body, every human soul dates its appearance upon the earth. It will limit its stay upon the earth to the continuance of its body. It seeks new conditions when the body no longer serves its ends. It as naturally falls off the mortal bough as the fully ripened fruit falls to the ground.

Again, we must strenuously dissent from an opinion held in some minds, that the soul is degraded by its union with the body. On the contrary, there is increasing evidence that it delights in its temporary abode. It delights to appear, express, and dramatize itself, through its body. It feels no sense of degradation in this alliance, for it shows its pride in its recognition of an ancestry of lower material forms, by many a remnant of serviceable organs which it still retains, and by many a gesture which it delights to use, and which has come down the same material path with the cerebral folds and the added chambers of the heart.

Take a single illustration, in three stages, of how the body translates the Vital nature.

1st stage. The lowest form of the Vital put to toil: the plantation slave, or the Mexican peon, where almost no intelligence is used. He digs, lifts, hews, draws as an animal. Of such an one Delaumosne expressively says: "His body is all of

one piece." There is little mobility or play of the joints; head and torso stiff; arm and hand an instrument for shoveling, digging, heaving, and drawing. Hand attached to arm, arm to torso, face wooden; movement of the lower limbs strong but automatic. It is a human machine, moved by the Vital Being.

2d stage. A higher form of the Vital. The slave or serf emancipated. A growing sense of personal ownership and responsibility. There now comes an increased freedom of movement, a crude blending of directive and Vital power.

The torso moves, by play of the shoulders, without much movement of the head. There is increased freedom of the arm and hand. The face is less wooden, the movement less animal-like.

3d stage. The well-defined Vital, with high directive powers, put to selfish and aggressive ends. The higher Emotive does not rule the conduct. It is the type of the military spirit. It is he who believes in physical force. Such an one says: "God is on the side of the strongest battalions." He believes in the right to conquer, hold, and rule, —

"The good old plan
That he should take who has the power,
And he should keep who can."

In a lower form, under the influence of civilization, it is the bully, or with training, the prize-fighter.

Now head, torso, and shoulders play freely, for there is high directive power.

And now note, the elbows are emancipated, and the lower Emotive nature let loose. The hand becomes the knotted end of a bludgeon. The Vital in the face makes the firm-set and protruding under jaw.

It is a human correspondence of the bulldog. Now the passion grasps the larynx, and the voice takes on the throaty qualities of the carnivora.

These are three illustrations from the lowest human zone,—the Vital.

We might sketch characters all along the ascent through the Mental and into the realm where the higher Emotive nature impels man towards ethical and spiritual ends and purposes, giving us expressions where the three natures blend in poise or equilibrium.

Now there is balance and accord of all the outward agents. Head, torso, and limbs move from liberated centres of motion. The wrist is free. It communicates its freedom to the hand and fingers, and at the same moment *both faces*, the countenance and the palm, are expressive.

It is three natures moving to the front as one. The Will lends itself to the central Being. Conscience allies itself with the ruling motive. It is man at his best !

The Vital is there to sustain, as Life. The Mental is there to guide and direct, as Mind. The Emotive, moving along its highest plane of

the ethical and spiritual, is there to impel, as Soul.

And these three psychic forces attain to their highest form of external expression through that mode of motion which we have characterized "Poise," or equilibrium of forces.

Let the student ponder deeply these propositions. They will be illustrated, again and again, as we proceed.

1. *The motions of the human body are correspondences of the great law of modern physics, formulated by Herbert Spencer, as "The concentration of matter, and the dispersion of motion."*

2. *"Poise" of the body is the external form of the conservation of Energy. Eccentricity is the external form of its dissipation.*

3. *So Poise of the body is the external symbol of the highest moods of the human Soul: the highest activity without dispersion.*

If it shall be found that the manifestations of the Soul through the body come under the rule of Law, and that the mode of operation of the law can be ascertained and formulated, it would seem that the statement of the laws, arrived at through modern scientific and psychologic method, would form a sure foundation for a Philosophy of Expression.

(c.) It is this attempt to deduce the underlying law from

the complex phenomena presented of a given psychic state, by hundreds of examples, that gives value to the observations of Delsarté. He seemed to realize the truth that any system of laws governing human expression, to have validity, must be founded upon what is now recognized as "the scientific method," whose weapons of discovery are observation, experiment, and test. The observation must be exact, the experiment sufficient, and the tests satisfactory.

Whether Delsarte did more than to sketch the outlines of a Philosophy of Expression, we have no evidence from authoritative sources. The material presented thus far, since his death, is empirical rather than philosophic in form.

Delsarte is reported to have formulated Nine Laws of Gesture.¹

These Laws are: Motion; Velocity; Direction and Extension; Reaction; Form; Personality; Opposition of Agents; Priority or Sequence; Rhythm.

(d.) The statement of these laws as nine; their limitation to that number; the fact that Delaumosne represents Delsarte as giving but six, namely: *Priority, Retroaction, Opposition of Agents, Unity, Stability, and Rhythm*; and that Arnand makes no mention of them; the differences in the statement of their number and order, both in Europe and America; and, more than all, Darwin's statement of but three principles² "to cover most of the expressions of man and animals," — led me to doubt whether these laws were authoritatively stated, and whether Delsarte restricted the number to nine, and if so why the restriction? And

¹ In making this statement we do not claim to represent Delsarte. We hope not to misrepresent his teachings.

² These three principles are discussed in a masterly manner in *The Expressions of Man and Animals*. They are: (1.) Serviceable Associated Habit. (2.) Antithesis. (3.) Direct Action of the Nervous System.

lastly the author was led into grave doubts whether Delsarte clearly apprehended the principle upon which all such categories, if presented as laws governing Expression, must rest.

The principle by which Delsarte's Nine Laws, and many other such statements of categories as laws, can alone be justified is none other than the great Law of Correspondence, recognized as the basis of their systems by Plato, Lamarck, and Oken as Philosophy, Swedenborg as Religion, Emerson as Ethics, and Goethe and Wordsworth as Poetry.

Oken states this Law so broadly that it may apply to the two subsistences that make the Universe. We give the formula of this great philosophic thinker.

Law : All the phenomena of matter, apparent, real, material, are correspondences of the Non-apparent, Ideal, Spiritual.

Swedenborg gives a more restricted formula, that applies to the two subsistences that by their union make Man.

Law : The human body, with all its parts and functions, is elaborated from the Soul, its faculties and powers ; and therefore corresponds to it in every particular of structure, form, and use.

We present a third formula, which lies at the centre of the Synthetic Philosophy of Expression, and which, with the two already stated, we urge the student deeply to ponder. It is

the formula of a teacher of the Art of Expression.

Law : Man expresses his psychic states in terms of his environment. These terms are related to, and correspond with, Space, Time, and Motion.

These formulæ cut the Gordian knot, and solve the Sphinx-riddle of Delsarte.

His nine laws are laws of Expression only through their dependence upon the great central Law of Correspondence.

They are corollaries of our main proposition. A little thought will make this plain. Every psychic mood finds its correspondence in some appearance of Nature and is interpreted by it. And we can only describe our psychic mood by that natural appearance as its picture.

What profound significance in the saying of Emerson: "The use of Natural History is to give us aid in Supernatural History!" and in Hugo's: "Animals are but our vices!" Such analogies are constant and fixed in the nature of things.

Read what Science has to say. Said John Fiske — our American Herbert Spencer :

"The earth is suited to its inhabitants because it produced them, and only such as suit it live.

"It is not that the environment is suited to the organism, but that the organism is suited to the environment. *Throughout all time, therefore, since intelligence appeared upon the earth, the*

world of conceptions has been maintained in more or less complete correspondence with the world of phenomena. And thus the contemplating mind and the world contemplated have become tuned in mysterious unison."

(e.) Do we need illustrations of these correspondences of Outer and Inner? Our discussion of these nine laws will be crowded with them.

Take a single illustration, of gesture in correspondence with Space as expressive of psychic states.

The psychic states which we would illustrate are Haughtiness, Conceit, and Command. The agent is the whole body. The eye leads in effecting these correspondences.

All three of these passions draw the body upward in space. (They seem to say: "See how high I am above you!") but the *direction* of the eye must determine further relations with space; and the eye will make different correspondences for each of the three passions. Thus Haughtiness draws upward the body, throws backward the head, and at the same time glances downward with the eyes ("The highest is 'self,' the object below, 'you'").

In Conceit, the eyes stray over the person ("How fine I am"). They glance about ("I wonder if they see me?").

In Command, head and torso are drawn upward, and the glance is open and direct ("I ask you to note that 'I' am higher in space than 'you' are").

So in our highest psychic moods the head and torso are drawn upwards; head and face lifted upwards; glance directed upwards in space.

Thus as the basis of Delsarte's Nine Laws of Gesture we find the *Law of Correspondence*. We will now consider these laws more in detail.

I.

THE LAW OF MOTION.

Definition. Motion is Force expending itself.
Our definition is also a definition of Gesture.

Gesture is the outer (muscular) movement by which the inner (psychic) force expends itself.

(*f.*) The student will make careful note that our definition of a gesture indicates that a conscious centre moves its mass of matter.

This is the distinguishing characteristic of an organism. Matter is inert. It is capable of receiving and containing any amount of mechanical force communicated to it from the outer, but it cannot originate the smallest increment of new force.

But wherever we find matter as mass, moved from a centre, we find the phenomena of Life.

As a problem of pure physics, gesture is an escape of Energy¹ in form of Motion.

Let us attempt to justify our statement. The nerve centres — the great centre, the brain, and the smaller centres, the ganglia — are the reservoirs of Psychic Energy. Now let us suppose a given quantity of this energy has accumulated at these centres.

By psychic act this energy is transformed into Emotion. Some part of this energy now discharges itself upon the muscles, where it appears as Motion, in the form of cries, gestures, and articulations.

A diagram will make this plain. The Emotion that is to appear in form of Motion is, we will suppose, Hate.

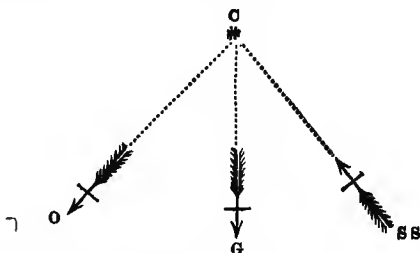
¹ Energy is the term used in modern physics for all the efforts of Nature, — Heat, Light, Electricity, Magnetism, Chemism, — forming, to use Tyndall's apt expression, "So many modes of motion."

But the Psychic Force residing at the centre of an organism is none of these forms of energy. Its rule over its mass of matter is absolute. It is a unique centre, and commands its periphery. Through motion of its mass it manifests.

Let *c* represent the centre of psychic force, the brain.

Let *ss* represent sensations of sight and sound, aroused by the presence of the object of hate *o*. The sensations of sight and sound are received at the centre, *c*, over the nerve line, *s c*.

Arrived at the brain the sensations of sight and sound are transformed into Emotive Energy. Now a part of this energy escapes along the line *c o*, toward the object of hate, and a part goes out along the line *c g*, where it appears as gesture.



This diagram justifies Mantegazza's definition of gesture as "*One of those centrifugal energies that surge forth from the great transformers of Force, the Nerve Centres.*"

According to Mantegazza, gesture is useful both in the economy of Life and in the economy of Art.¹

Thus in the economy of Life:—

I. *It may defend the nerve centres and other parts of the body against numberless perils and enemies.*

In the economy of Art:—

II. *It may take the place of spoken language, or it may add to its completeness.*

(*g.*) The student will readily call to mind the great number of gestures of defence made by animals.

¹ See *La Physionomie et l'Expression des Sentiments*. Paris, 1885. Félix Alcan, publisher.

The instinct of self-preservation, we may be allowed to say, has taught even insects to throw out their limbs in threatening attitudes. Among birds gestures of attack and of threatening are frequently made by enlarging their appearance by spreading their wings, and by screams. The defensive gestures of the carnivora are full of force and terror.

We shall find abundant reasons to agree with Mantegazza, that "Gesture is scarcely inferior to Voice, or Speech, in the Arts which employ these three agents of Expression."

We apply to gesture the three forms of Motion as correspondences of the three states of the Being.

We present the formula of Motion as related to centres : —

I. *Motion from a centre outwards is eccentric (or centrifugal) Motion. It corresponds with our Vital states.*

II. *Motion towards a centre inwards is concentric (or centripetal) Motion. It corresponds with our Mental states.*

III. *Motion centred, namely, held in balance, is "at Poise." It corresponds with our highest Emotive states.*

(h.) We believe Delsarte to have been the first to apply the three modes of Motion to the three states of the Being. This is his great discovery, and is at the centre of the Delsarte System.

Yet we fancy that a philosophic mind reading Sir Isaac Newton's "Three Mechanical Axioms" will be strongly impressed with the idea that the great French teacher found the data for his laws of Motion, as applied to Expression, in the masterly formulæ of the great English thinker.

We present the three familiar axioms laid down by

Newton, and ask the student to note how often they appear — and that of necessity — as bases of Delsarte's laws governing Human Expression, as related to the restrictions of Space and Time: —

(1.) *Every body continues in its state of rest, or of uniform motion in a straight line, except in so far as it may be compelled by impressed forces to change that state.*

(2.) *All motion or change of motion must be proportional to the force impressed in quantity, and must be in the direction of that straight line in which the force is impressed.*

(3.) *To every action there is always an equal and contrary reaction.*

We may formulate our conclusions thus far arrived at —

I. *Man is one in consciousness, three in manifestation.*

II. *All manifestation is through Motion. Matter in Form is arrested Motion.*

III. *The three states of the Being, the Vital, Emotive, and Mental, manifest themselves through three modes of Motion: Eccentric, Concentric, and Poise.*

II.

THE LAW OF VELOCITY.

Velocity may be defined as *the relation of Motion to Space and Time.*

The units of measurement of velocity adopted by scientists are a second of time and a foot of space.

Delsarte's Law: Velocity is in proportion to the mass moved and the Force moving.

(e.) This law is founded upon the principle of the pendulum. The oscillation or swing of a pendulum is the result of the action of two forces, — momentum and gravity.

Hence it is a necessity of physical conditions that a pendulum with a long radius sweeps through more space, and hence gives slower movement than a pendulum with a shorter radius.

Now the human body is moved in exact accordance with the law of the pendulum.

A centrifugal flow of Vital force is the momentum or energy imparted. Gravity is the second force.

So we have the body moving along by the pendulum swing of the legs, and maintaining its equilibrium by the added and *opposite* swing of the arms.

We find the following pendulums as acting agents in Expression: The Head, the Torso, the Legs, the Arms, the Hands, the Fingers.

(f.) Let the student note three things which he will apply in his technical training of the agents of Expression.

1. The point of suspension or centre of motion of the agent.

2. The momentum or force given the agent.

3. The arc described by the agent under these conditions.

In the play of these human pendulums, those with short radii move faster and describe smaller arcs than those with longer radii.

Thus the movement of torso and head as mass, from the centre of motion at the hips, presents the longest radius and describes the largest arc.

Hence, of course, it presents the slowest movement. The head is an agent with a shorter radius, and the hand shorter than either.

Let us now restate the Law of Velocity, and see if we can find its reason to be in its application to gesture.

The Velocity of any agent is in proportion to the mass moved and the Force moving.

The mass to be moved may be any agent, — torso, hand, eyelid, voice.

The force that moves the mass is that constant energy, the psychic element.

So we may say that *the amount of Motion shown by an agent of Expression, in Space and Time, will be the measure of the amount of Emotion.*

The following propositions will show the rule of the law of correspondence between the body and the Psychic.

Prop. I. In proportion to the depth and majesty of the Emotion will be the deliberateness and slowness of the motion.

(g.) By a law of our Being, — a law from which there is no escape, — we are compelled to state our feelings in terms of matter.

This is so, because matter and its forces are types or correspondences of mind and its forces.

So we borrow the restrictions of space and time to say, as our best way of saying of feelings that stir the soul to its depths, that they are grand, lofty, deep, weighty, grave, massive.

And we borrow from that immense reservoir of correspondences, “the nature of things,” the fact that bodies with

large mass move slowly, and so state our feelings in the most exact correspondences of matter which we are able to find.

We do not need to be told how Webster, in this passage from his greatest oration, made correspondences of body and Soul. Let the student note the rhythmical tread of these sentences : —

“When my eyes | shall be turned | to behold | for the last time | the sun in heaven, | may I not see him | shining | on the broken and dishonored fragments | of a once glorious Union ; | on States dissevered, | discordant, | belligerent ; | on a land | rent with civil feuds, | or drenched, | it may be, | with fraternal blood.”

It is as though the Mount Washington that Daniel Webster as a farmer's boy looked upon had moved from its base, and was treading across the continent.

Our next proposition will carry its own comment.

Prop. II. In proportion to the superficiality and explosiveness of the Emotion will be the velocity of the motion.

Thus, sharp, superficial emotions translate themselves by quick, sudden motions.

Our vexations, which are to the mind what pin-thrusts are to the flesh, declare themselves by such gestures as snapping and tapping with the fingers, and by other quick, nervous, and inconsequent motions.

Prop. III. The longer an agent of Expression is held at rest, the greater will be its motion when released.

(h.) It is well known that the suppression of external signs of feeling makes the feeling more intense. And this is true of nations as well as individuals. The longer a people is held in chains the more terrible the outburst.

What better example than the French Revolution? What warning more significant than the present attitude of Russia toward Poland and her own middle classes?

What more ominous than the deep murmurs of discontent of Ireland?

A single illustration. A widowed mother has lost her only son. The physician is told that she has shed no tears since death entered the door.

She sits silent, with impassive face and eyes fixed, in motionless despair.

The physician shakes his head. He fears insanity. Twenty-four hours have elapsed. He calls again. He is told that she is weeping. A smile comes into his face. He turns away, saying, "I am not needed now."

Prop. IV. When the Being contemplates, or is filled with, the majesty and power of a great cause, as a love of liberty, or of loyalty to conscience and duty, or of obedience to God, all the agents of Expression stand in Poise or equilibrium.

(i.) Let us quote a single short line from history: "While their flesh crackled, and hissed, and shriveled in the red flames, *their faces glowed with a strange calm, as if their eyes beheld with open vision the Christ!*"

III.

THE LAW OF DIRECTION AND EXTENSION.

These words present to the mind two ideas of Space. Where a man stands is to him the centre of the Universe.

It is a primary idea, that Space is illimitable. We think limits only to find that outside our last boundaries there is more Space.

A line projected from where we stand would never reach the periphery of the infinite circle of Space.

It holds all things so far as we know or can imagine, with room for more.

Our idea of Extension doubtless comes from our seeing matter filling some portion of Space. Were there no masses of matter, there would be, to our consciousness, no Space.

Hence matter is the reality of Space. And our idea of Direction is the place of an object relative to ourself. Thus to a man standing on the shore, the ocean has Extension, and a ship in view has Direction.

We formulate two laws of Gesture founded upon our ideas of Direction and Extension.

THE LAW OF DIRECTION.

The lengths are Vital.

The depths and heights are Mental.

The breadths are Emotive.

(j.) Need we refer here to our formula of the Law of Correspondence? We restate it: *Man expresses his psychic states in terms of his environment.*

All our lives, from childhood till now, have the relations and conditions of space impressed us.

What wonder that our *expressions* continually reproduce our *impressions*!

So our Vital nature goes out in lengths, both in idea and in fact, and through structure.

We strike a vital blow from the shoulder. True as fact, true as metaphor, picture of the fact.

We push through obstacles in a straight line. Some men

we say are direct and straightforward. "He never swerved a hair's breadth from the line of his duty." And for manifestations of our Mental states, heights and depths correspond equally well. We fathom the depths of Philosophy. We go deep into Science. We climb heights of Knowledge. The earliest picture the author remembers was on the title-page of his first spelling-book. It was of a youth of most determined bearing climbing a particularly steep hill, and upon the summit of the hill stood the Temple of Knowledge, shaped for all the world like the ornamental pepper-box that graced his good mother's table!

Politics is a ladder by which to climb into power. Men swim with the current of affairs, and drift along in the stream of events. We

— "dive into the bottom of the deep
Where fathom line could never touch the ground,
And pluck up drowned Honor by the locks."

And the breadths are no less happy in expressions of our ethical or moral states.

We spread abroad good tidings. We are wide in our benefactions. The death of a great and good man spreads gloom over half the world.

Law of Extension: Delsarte is reported to have formulated this idea thus:—

Extension in Gesture is in proportion to our self-surrender. It will be noted that this formula corresponds a subjective state—that of self-surrender—with the objective idea of the going out of the body, or some of its agents, into Space.

Note the strength of this Scripture through correspondence:—

"But when he was yet a great way off, his father saw him, and had compassion, and ran, and fell on his neck, and kissed him."

Thus we find that Extension, or going out of matter into Space, is the physical correspondence of the going out of ourselves, in surrender to our highest concepts, to friends, to country, to the right, to God.

The student will take note that these are expressions from the higher Emotive nature, and become true through correspondence with Space.

And we may say, broadly, that the phenomena of the dispersion of matter correspond with our altruistic states ; and the phenomena of the concentration of matter correspond with our selfish and egotistic states.

IV.

THE LAW OF REACTION.

We define Reaction as the return of Force. "Action and reaction are equal," is Newton's third law of Motion.

In organisms this law might be called the law of Life. Where there is no return of motion there is no life. Sentient organisms from highest to simplest die when they cannot answer solicitations from without.

The Law of Reaction, as applied to our psychic states, has been formulated thus, by Herbert Spencer:

"Emotion always tends to produce motion, and when it becomes extreme always does produce it." We may add as corollaries:—

1. *Every extreme of Emotion tends to react*

to its opposite. Concentric states tend to explosion, and explosion tends to prostration.

2. *The only passion that does not tend to its own destruction is that which is poised, or is in equilibrium.*

3. *The Soul in its highest moods translates itself by poisoning its agents.*

Poise the Soul and the whole muscular system is in action to poise the body.

Here we state the Law of Climax : —

Law : There should be but one strong climax in a perfect work of Art. The artist should work steadily toward that climax.

(k.) This is a most important law for the reader, actor, musician, or orator. Anti-climax is fatal in Art.

All should be arranged in reference to the point of highest interest, as in painting all is arranged in reference to the point of highest light. Dramatic Art, in America, shows an utter defiance of this principle. Our audiences are so used to the crude exhibitions of the theatre, and the actors at the theatre so used to their immature audiences, that all is overdone, loud, pronounced, startling, objective, — all is climax.

Emotion always tends to move towards a climax, which it holds for a brief time, and then subsides.

(l.) This correspondence of our psychic states with the wave motion of fluids, as made visible in the waves of the ocean, is a profound one. All the great movements of Nature illustrate it: the tides with their ebb and flow, storms rushing on to their highest point of violence and calm succeeding, fierce heats and cold.

Mountains — valleys. The day — night. War, with its

terrible climax of passion — peace. Life — death. And finally, the latest deductions of modern science lead to the conclusion that all the great forces of Nature, heat, electricity, light, magnetism, are but series of climaxes, or wave motions.

Delsarte is credited by Mr. Mackaye¹ with a characteristic illustration of the Law of Climax. It is called

The Battle of Reason and Passion. .

The thermometers of passion in the face,— the corrugators (muscles of the Will), the nostrils, and the close-shut canine teeth (on the left side of the mouth), — indicate passion. The hand contracts, as in less degree does the whole body.

These manifestations, showing the inner struggle, go on with increasing intensity until the force of Passion exceeds the force of Reason.

Then comes the explosion of Passion in the sudden vehement expansion of gesture.

¹ A student of Delsarte, who first introduced the ideas of his distinguished teacher into America.

CHAPTER IV.

THE NINE LAWS OF GESTURE (CONCLUDED).

V.

THE LAW OF FORM.

OUR ideas of Form come primarily from matter. *And we may define Form as the figure or shape of extended Matter.*

At first the child separates actual objects by touch, and later on notes the fact that such and such objects fill such and such spaces.

After light, form is Nature's first stimulus of sight. So Astronomy and Geometry are the oldest of our sciences.

The motion of a point in Space generates a line. The motion of a line, a surface. Of a surface, a solid. So a solid is the absolutely extensive.

Again: take a point of matter, let it expand in Space on equal radial lines, in all directions, and we have the globe.

Do you remember, kind reader, the story of the fisherman, in the world's wonderbook for children, the Arabian Nights' Entertainments? How, hauling his nets, he drew from the sea a casket, rusty, and covered with weeds?

Led by curiosity, he pries it open. A light vaporous cloud issues. It expands, takes on first irregular shape, and as he looks changes into a terrible genius with uplifted scimitar!

The Spirit of Form with the Greek was Proteus. Now this, now that, before your eyes!

Delsarte is credited with these statements of the Laws of Form:—

I. *Forms bounded by straight lines are Vital, embryonic, plebeian in expression.*

II. *Forms bounded by curved lines are Mental and Reflective in expression.*

III. *Spiral forms are Moral, Spiritual, Mystic, in expression.*

A flame is spiral. It is the symbol and correspondence of the mystic in nearly all the ancient religions of the world.

(a.) Let us examine these three statements of Delsarte. We think the first can be justified, that "*Forms bounded by straight lines are Vital, embryonic, plebeian.*"

In the inorganic world Nature everywhere constructs with straight lines. She builds her inorganic masses out of crystals, in straight lines and at fixed angles.

So in the primitive age of the world all was crystallization.

And a mass of crystals bounded by straight lines gives little suggestion of advance into the realm of organic life, but suggests through correspondence ideas of inflexibility, strength, and insensibility, and may be said to be void of higher mental or emotive expression.

Let us examine the second statement: "*Forms bounded by curved lines are Mental in expression.*" We think Delsarte could not have made this assertion. The Law of Correspondence would certainly deny it. And besides, he everywhere allies grace and harmony of gesture with curves.

We think we may say that forms composed of *arranged* lines are Mental. That is, they show that man's, not Nature's, mind arranged them. Arranged lines are unknown in Nature's disposition of scenic effects.

So, if we were in what we supposed to be an uninhabited country, and should suddenly come to a straight row of trees, or of plants growing in straight lines, we would know that the mind of man had ordered the arrangement.

Nature never sent a straight stream of water babbling down the hillside and through the meadow, with no eddies or covers for trout.

There is always an *intellectual value* in the straight line, and an *emotive value* in the curved line. Forms bounded by straight lines tire the eyes. It is well known that curves rest them.

Thus it happens that the forms of masses of matter, and the lines which bound them, continually received by us as sight sensations, and these sensations heightened by color, are reproduced as expressions of our psychic states.

And so our gestures outline forms, describe lines, trace segments of circles, and apply all the elements of geometry to the spaces about us.

Indeed, as will be illustrated in our talk upon the hand and arm, so bound are we to Form that all our gestures bear relation to the lines, spaces, and forms of a projected globe.

(b.) Thus it is seen that we seek, in the outer, correspondences for our inner psychic states.

We find it a continual experience that objects bounded by straight lines are solid, firm, strong.

So primitive man, in strict correspondence with the Vital age of the world, built the Pyramids, or threw up huge cubes of stones.

And so, too, we find it a continual experience that objects bounded by curved lines give us a sense of lightness, beauty, and gracefulness.

But what terrible vitality the zigzag of the lightning discloses, "when in blind rage the crooked red blade springs from the black sheath and stabs the earth right and left" !

So the arch types both strength and lightness. The struggle in architecture is always between the strong, the solid, the firm, of straight lines, appealing to our Vital nature, and the light, the graceful, the tasteful, of curves, appealing to the æsthetic sense, rooted in the Emotive and Mental.

Note the straight Vital lines of the great Assyrian and Egyptian temples, in many instances hewn of solid rock. What a calm solidity and almost conscious strength they exhibit !

And, in contrast, note the pagodas of the Chinese and the tea-houses of the Japanese, with their outlines of fanciful curves and grotesque figures. What lightness, gayety, and insecurity they present !

But the sloping roofs of the huts of the Esquimaux are symbols of a continuous vital struggle with a terrible environment of ice, cold, and hunger.

And now, for a closing lesson in the significance of Form, turn to that marvel of beauty of outline and harmony of proportion, that even in its ruins charms the world — the Parthenon.

It is a modern discovery that all the lines of this wonderful structure are sections of the circle, but the curves are so delicate as to have escaped notice for centuries.

Conscious of the beautiful, without knowing why or how beautiful, what a tribute to the perfection of Greek architecture !

Thus form, color, and motion of objects in Space, received thousands and thousands of times as sight sensations, have wrought into the very fibre of our Being their numberless correspondences.

So, form of substance corresponds with form of essence, and the exterior is the visible correspondence of the interior.

There is a wonderful verity in the song of our poet Lowell, that even the gross earth crystals climb to a soul, in the form and perfume of the flower. And, in the last analysis, outer and inner proclaim their unity. The whole and the part are one.

The mysticism of Goethe becomes the plainest of plain truths, and his poetry prosaic, read in the light of the new science of Darwin and Haeckel, Spencer and Fiske.

"We must, in contemplating Nature,
Part as whole give equal heed to;
Naught is inward, naught is outward,
For the Inner is the Outer."

VI.

THE LAW OF THE PERSONALITY.

The Personality is man in his completeness or wholeness. In other words, it is the Ego, or individual Soul and its body, with tendencies, characteristics, and energies peculiar to the individual.

So the Personality is the element of difference in a nature common to all men. It is that which distinguishes the man from men.

Delsarte makes the Will the agent of the Personality. He says: "Whichever of the three states of the Being is in action, the Will is its agent."

Rosmini, the great Italian metaphysician, says, "The essence of the personality is the Will."

And this agrees with modern definition: "Our faculty to make effort." "The Will is that by which the Mind does everything that it does."

Law of the Personality: The conscious activities of the Soul express themselves through motion. These gestures are Attitudes and Inflections.

The unconscious, constitutional, and hereditary tendencies and activities express themselves through fixed and permanent form and motion.

These forms and gestures are Bearings.

All gestures belong to one of three classes, — Bearings, Attitudes, or Inflections.

These terms refer to fixed, permanent, and habitual; or present, instant, and fleeting, forms of gesture.

Let us consider each class more in detail.

1. "*Bearings*," from the Anglo-Saxon word "*beran*," I carry, refers to the habitual carriage of the body.

Bearings are characteristic of the whole man. They often sum up the activities of a lifetime in a single gesture.

Thus Lavater referred to Bearings when he said: "Every man has his favorite gesture; and were it possible to surprise him, and to delineate him while using this gesture, it would furnish the key to his whole character."

Bearings are ingrained, constitutional, hered-

itary, repetitious. They come down the long line of our ancestry.

They are the marks of heredity, — evidences that the dead still keep their hold upon the living, transmitting from generation to generation some trick of manner, or peculiarity of gesture; some open mark upon the face; some hidden fold upon the brain, — a smile, a lifting of the eyebrow, a curl of the lip, a wrinkle upon the forehead.

Attentively study the past of your ancestors if you would forecast your own future.

(a.) These transmitted inheritances make or mar us. It is as though all our ancestors were represented in a huge kaleidoscope; each ancestor by a bit of colored glass. One turn of the instrument, — the bits of glass rearrange themselves, and there is a birth!

And the new-born babe is a blend, mosaic, or, to use a happy phrase of Francis Galton, “a composite portraiture” of his ancestors.

So a man’s Bearings disclose his past. They show what manner of race he sprang from; what he has taken from the old stock; what he has added to his inheritance by culture and experience; how habit, good or bad, has made or marred him.

(b.) The student of Expression must keep in mind the fact that the central expressions are Bearings, and should be made the starting-point for critical study.

“Ah! the face is that of your mother, but when you speak your voice is your father’s.

“Just the way he knit his brow, too; and you use the

same by-word, with just the suspicion of a stammer! A chip of the old block!"

It was the Bearing from the Vital root that struck Benjamin West, our great American painter, when he exclaimed at first sight of the Greek Apollo, "By Hercules! A young Mohawk!" And it was the Bearing, the inherited instinct of rulership, traces of the old habit of commanding, that in King Lear survived the terrible seizures of insanity, and at intervals proclaimed him "every inch — a king."

2. *Attitudes are arrests of motion.*

A gesture held in place is an attitude.

Attitudes are comparatively passive, and show that some particular mood is dominating consciousness for the time being. An attitude should not be held too long; only while the mood dominates. And by the law of climax it should mark the highest point of the domination of the passion.

(c.) There is a wonderful power in Attitude. It presents and holds before the eye for the instant a synthesis of the mood or passion, as a projected picture. It is painting and living sculpture as one! This unity makes it superior to speech, which only tells what you see — only *names* the picture. So Mental men never reach the climax of attitude. They rarely project a gesture with the long arc of the free arm.

Their gestures mark relations between ideas; they number, and tell how high, how deep, how often, how many, and how much.

They free the Mental agent, the forefinger, and, closing their eyes, shut out the external world and commune with themselves.

3. *Inflections are fugitive, instant, and present forms of gesture.*

They translate the immediate and transient moods of consciousness.

They are instant, and disappear.

The face is the special ground of their display, and next, as an expressive agent, comes the hand, which is a second face.

So an arrested inflection becomes an attitude. A fixed attitude (when held too long), a posture. An attitude made permanent, a bearing. An inflection put on is a grimace, and has no art significance.

(d.) An illustration of the grimace is the familiar one where one person declaims and a second stands concealed by a cloak behind him and makes the gestures. It is the utter incongruity between the words of the one and the gestures of the other that makes the situation so ludicrous.

Note, too, the smirk of the danseuse, and the play of head and arms when she retires "amid great applause." Her illustration of the Vito-Vital in Art won the noisy plaudits. Her grimace was an entirely fit acknowledgment.

VII.

THE LAW OF OPPOSITION.

Opposition is the placing over against one another of objects or forces.

This law in its broadest application is a statement of the Law of Life. Opposition of forces distinguishes the living body from the dead. When the Soul can no longer maintain the balance and play of forces, its body dies, falls in

pieces, disintegrates, ceases to be organic, becomes dust. Its fluids dissipate, its solids crystallize.

Herbert Spencer defines the process of Life as "the continuous adjustment of internal relations to external relations," and Delsarte declares "the opposition of forces to be an *instinct* of the Soul." As though the Soul instinctively feels that it can maintain its hold upon its body only by strenuously opposing its forces to the forces of Nature, always in arms against organized matter, and perpetually threatening its destruction. Hence, Nature's almost brutal unconcern for the life of the individual.

"Let the race survive," she says; "I have little heed for the individual."

So with an impartial hand she throws a whole brood of callow robins out of their nest to perish in the rain, and in the plenitude of generosity sows the rocky bed of the ocean with myriad eggs — the living spawn of a single codfish!

Law of Opposition: In the opposition of the agents of Expression rests the harmony of Gesture. Therefore oppose the agents in action, that equilibrium may result.

(a.) The student will note that this law finds its objective correspondence in the action of the force of gravity upon bodies. It is Nature's assertion that all the parts of a mass of matter shall relate themselves to the centre of that mass.

When this relation exists — when the parts thus balance — we feel a sense of security. Objects out of balance at once proclaim insecurity.

Thus, though you know the Leaning Tower of Pisa has kept its balance for some centuries, if you stand at its base and look up along its inclined shaft, no amount of reasoning can remove the sense of danger that comes over you.

This statement of law, credited to Delsarte, is but an application to the human body of the universal Law of Statics, governing mass.

The body must obey this law — must hold itself in equilibrium — or nature will perform the office, and proceed to relate the separated mass to the greater mass of the earth.

But Expression rests in motion. And nature is not quite satisfied when she has, through her static law, balanced the human body. Her query is, evidently: “How shall I make this mass, now in equilibrium, move?” Her answer to her own questioning was *an organism* (i. e., *a psychic centre controlling its own mass*).

So, we have the human organism, presented as both static and dynamic.

That is, it has its *standing* side and its *moving* side. It thus makes two presentations.

Its standing presentation is comparatively inexpressive.

Its dynamic presentation is its expressive side. Dividing it into back and front, the back is as a dead wall, against which stands and acts the expressive front.

We may call the static side *passive*, and the dynamic side *active*.

Or we may say that the static presentation is *negative*, and the dynamic presentation *positive*. Again: we may say the static presentation gives *Form*, the dynamic *Motion*.

And in Form and Motion rests the whole of Human Expression.

So we may add a proposition to Delsarté's Law, deduced from our considerations.

Prop.: The greater the number of agents that unite in balanced and harmonious opposition, the higher the form of Expression.

(b.) Let the student contrast the few, simple, and inexpressive gestures of children, when "speaking a piece," with the wealth of expressive play of the trained actor. The Law of Evolution is as constant in art as it is in nature. The procedure is from the homogeneous to the heterogeneous. The whole play of the agents with the child is simple; with the actor, complex. Our delight is in the surprises which the actor constantly occasions through complexity. As Emerson has somewhere stated it: —

Through the stairway of surprise
Mount we into Paradise.

The works of all great artists confirm the Law of Opposition of Agents, by whose aid gestures attain to complexity, and so delight us by presenting variety in place of uniformity.

Take an example. One day, looking through Gustave Doré's wonderful art conceptions in Milton's "Paradise Lost," these lines and their illustration caught my attention:

So parted they: the angel up to heaven
From the thick shade, and Adam to his bower.

Adam is the principal figure. The angel is represented in the distance as nearing the zenith. I noted the following oppositions: (1.) The right side of the body is static, the

left dynamic. (2.) The static side presents the right leg firm but not stiff; the dynamic side presents the left leg as free and bent at the knee. (3.) The right arm is thrown upwards, with the forearm thrown over the head, so that the hand grasps the left side; the left arm is thrown outwards from the body, with the palm of the hand turned towards the ascending form of the angel. (4.) The head is raised and turned toward the right. Broadly speaking, Delsarte's statement is justified that in presentations of the agents of Expression : —

1. *In parallelisms of the agents there is a want of gracefulness and harmony.*

2. *In oppositions of the agents there is grace, the highest form and evidence of harmony.*

Delsarte is reported to have thus formulated the Laws of Opposition in dramatic action : —

I. *Oppositions should be simultaneous in Tragedy and Comedy; they should be successive in Farce.*

(c.) Take a single illustration of this law, in two scenes.

Scene first. Banishing, from a sense of justice, one whom we have trusted.

Here the agents in opposition we will suppose to be the head and right hand. These agents move by the same impulse and together. The decision is determined upon; the psychic mood is single.

The gesture precedes the spoken words. The hand moves *toward* the object, with palm open and facing object. The head moves away from object. "Go, and never more be officer of mine."

Scene second. Same words addressed to same person. The mood is now complex. Justice is opposed by mercy. So, two sets of agents are called into action. (1.) Head and right hand. (2.) Head, torso, and left hand. These agents move simultaneously. The action is: first, eccentric, head and right hand, and *toward* the object; second, con-

centric, head and left hand, *away from* the object. At the same time the words are spoken the left hand seeks the torso.

II. *Parallel movements should be successive in Tragedy and Comedy; they should be simultaneous in Farce.*

(d.) Let us illustrate. Suppose the approach and greeting of an esteemed friend. Note that the parallel movements of the agents are successive. This may be the order of the gesture: (1.) The eye notes the approach. (2.) The head is raised. (3.) The torso is eccentric. (4.) The features of the face expand. (5.) Now, if surprise enters the mind the brows are raised. (6.) Now the hand is extended. And (7.) articulate speech follows.

It will be seen that if these gestures should be precipitate and simultaneous, rather than parallel, we should have the essence of Farce, or Burlesque.

III. *It is through the Law of Opposition that the expression of a passion gains force by using its contrary sign.*

(e.) The smile overspreads the face in moral sadness. We shed tears of joy. There is a terrible laugh in moments of helplessness. The mother shakes her head, but at the same time smiles, when, in words, she denies the request of her child. The child translates, and, finding that two languages say "Yes," ravages the sugar-bowl.

Said a friend to me: "I never felt that laughter could be more pathetic than tears, until I saw Edwin Booth's assumption of Brutus, where the actor plays the idiot, and covers his terrible passion of grief with the mask of laughter."

In spoken and written language, antithesis, the placing over or against one another of ideas, by opposing the words of sentences, has from

the earliest times given life to expression through its sharp contrasts.

VIII.

THE LAW OF SEQUENCE, OR PRIORITY.

The word sequence indicates an order of succession. This thing, event, or action, first; that, second; and so on to the end.

(a.) It was a delightful sequence that filled eye and ear when, as youths, we set on end a number of bricks, and revelled in the regular click of their impact and fall.

And who can forget the solid satisfaction he found in the sequence of sound that followed him as he ran along, striking with a lath the spaced boards of the picket-fence?

This law is of vital importance to the orator. He is a poor speaker who cannot suggest what he is about to say before he says it.

Great orators know that they must project the ruling mood before they speak a word. Not until the picture is seen does the orator name what it is that is seen.

(b.) It will be noted that the Law of Sequence is founded in the relation of the nervous system to its environment. Nothing external is perceived until it first makes an impression upon an organ of sense.

Law : Impression always precedes Expression. We must have before we can give, and give in the order of having.

Gesture precedes speech, and gestures of the face precede all others.

(c.) In the genesis of gesture, priority in the action of the agents of expression depends upon priority in ideas. So we shall have a sequence of the Outer as the correspondence of a sequence of the Inner. Take the hand and arm as agent, and we have this sequence.

(1.) *Preparation.* (2.) *Direction.* (3.) *Stroke of the agent.*

In the face, the sequence is: (1.) The eye. (2.) The brow. (3.) The lips and nostrils, which usually act together.

So we may say that our Vital and Emotive natures are first put into gesture, then the Mental makes its comment, — that is, put into speech.

In point of time, we put expressions of our Vital nature into gestures quicker than those of our Emotive nature; and those of our Emotive quicker than those of our Mental nature.

(d.) Take a single illustration: A man in a moment of passion, under the impression that an insult is intended, puts the Vital impulse into a blow, and knocks down his opponent. Hardly is he down before the higher Emotive nature asserts itself, and the striker bends to lift the prostrate man. And now the Mental nature has time to make its comment, which it puts into profuse apologies. Let the student carefully note the rationale of Sequence, or order of action of the three states of the Being.

Our Vital nature is animal, physical, and instinctive. It springs first into motion with all the lower animals and with man.

Our Mental nature is rational, reflective, knowing. It takes time to note relations; it thinks before it acts. If it thinks twice, and then thinks again, we say it will act wisely.

Our Emotive nature is closely allied to both the Vital and the Mental. Its roots are in the soil of sensation, its branches in the air of thought. So with most persons, "I

feel it is right" goes into act quicker than "I ought to do right."

Whichever condition of Being dominates consciousness, that side will lead the sequence in gesture; or, to use Delsarte's empirical but convenient phrase, "the Will lends itself to whichever side of the Being is in action."

(e.) Take an illustration, founded in fact, of the order or sequence of expression.

An artist, having taken offence at his aged and wealthy patron, painted a satirical portrait of him, and invited him to his studio.

The painter had adroitly introduced into the noble features the Darwinian idea of man's descent. The patron arrives. The picture is uncovered. The patron (1.) glances at the portrait. (2.) He now looks at it critically. (3.) He steps backward and partly closes his eyes. (4.) He now steps toward the portrait, and at the same moment there is a spasmodic closing of both the hands and a firmly set mouth. (5.) Instantly, now, his face flushes; he glances rapidly, first at the picture, then at the artist. Now (6.) he rocks the torso to and fro. A moment only elapses. (7.) He draws upward the body along the vertical line. He becomes calm, poises the body, and, turning slowly, (8.) looks at the portrait with open and level eyes, — they are judicial eyes, — then looks intently for a moment into the eyes of the painter, and (9.) without a word leaves the studio.

In this case, it is clear that in the first moments the Mental dominated consciousness. Next, the Emotive and the Vital struggled for supremacy. At last the higher Emotive (a blend of the Ethical and Reflective elements) dominated, and we had the *calm of conscious control*, which we have called "*Poise*."

Now it so happens that the son, a young man just fresh from college, hears of the insult put upon his father. He strides to the studio; he does not walk. He forgets cere-

mony; does not stir the knocker at the outer door; speaks no "by your leave" at the inner. He seeks out the portrait. A glance sets him on fire. He cuts the canvas into shreds with his knife. He intones, and explodes "radicals" like bombshells, as outer correspondences of his inner states.

IX.

THE LAW OF RHYTHM.

Rhythm is the measure of Time or Motion by regularly recurring impulses.

(a.) Modern science has shown that our satisfaction in rhythmical motion has a physical basis. John Fiske thus sums up the conclusions of a convincing argument: "In all cases, whether in masses or molecules, rhythm of motion is necessitated by the fact that in a multiform universe no portion of matter can move uninfluenced by some other portion. Hence, periodicity, rise and fall, recurrence of maxima and minima, is the law of all motion, whether in the star rushing through space, the leaf that trembles in the breeze, or the blood that courses through the arteries."

It seems beyond dispute that our satisfaction in dancing and in music, in song and in the cadences of oratory, has for its basis a physical support. It is through this correspondence that the Plastic Arts, Architecture, Modelling, and Sculpture gratify our æsthetic nature by presenting, through proportion and symmetry, the rhythm of Form. It was this basis, in fact, that gave immediate currency to the phrase, "architecture is frozen music."

(b.) It was this subtle force in Nature, seen in the vibra-

tion of matter, — this dance and song, — that the Greek poets celebrated in the sun god, Orpheus, at whose golden touch the mountains danced and the trees nodded their plumes.

“For Orpheus’ lute” (the symbol of rhythm in nature)

— “was strung with poets’ sinews;
Whose golden touch could soften steel and stones,
Make tigers tame, and huge leviathans
Forsake unsounded deeps to dance on sands.”

Thus we find that the *rhythmos* of the Greek philosophers has for its correspondence the wave motion of modern Physics.

The Law of Rhythm is the Law of Harmony, and Harmony is the pervading Law of the Universe.

(c.) Through the Rev. Wm. R. Alger, Delsarte is credited with this sublime concept of the Universe: —

“The mysteries of God are revealed in Space and Time, through Form and Motion; they are concentrated in Rhythm, which is vibration or swing of matter through equal spaces and in equal times.”

And Mr. Steele Mackaye, one of the earliest students of Delsarte, thus reports the great teacher: —

“In the universe God’s purpose is shown through the lapses of Time.

“His design, through the realms of Space.

“His power, through all the forms of Energy that pervade the universe.”

Do these utterances of Delsarte seem vague, obscure, mystical? Yet we must admit they find their parallels in the utterances of Aristotle and Plato, Pythagoras and Heraclitus, and are again and again reflected in the writings of Oken and Carus, Goethe and Lamarek, and by metaphysical thinkers of modern times.

Let it be borne in mind that the Greek philosophers had no such evidence as modern science presents upon which to

base their conclusions. Their deductions were purely subjective, and were founded in *felt correspondences* between the visible and the invisible, the physical and the metaphysical.

And so the saying of Heraclitus that ceaseless change, *παντὰ ρεῖ*, is the law of all things, and that in nature there is an endless flux and flow of phenomena, becomes *established fact* in the science of to-day.

The deduction of Pythagoras that the Law of Harmony rests in numbers, and that everything resolves itself into numerical relations, reads like prophecy, when science, after the most exhaustive experiments, declares heat, light, and electricity to be so many modes of motion, and that the direction of modern physical science is toward a generalization which shall express the fundamental law of all motion by one simple numerical ratio.

With reason then we may say that our sense of and delight in Rhythm rest in correspondence between physical and psychic conditions; and that *our gestures, that gratify the æsthetic sense, reproduce symmetry and proportion, in Space and Time, through Motion.*

Law: The Vital nature expresses itself through forms of objective rhythm.

The Mental and Emotive natures find their correspondences in, and express themselves through, forms of subjective rhythm.

(d.) Children, savages, and the inferior races everywhere delight in objective rhythm. The sharper the accent the higher the enjoyment.

The babe cries to have its cradle rocked accompanied by

the sway of the nurse's body and the accented song. Savages beat time furiously in their war dances, and the speech of primitive man was doubtless filled with alternately recurring impulses of Vital sounds.

In all forms of art, as man progresses, undue accent and emphasis give way to proportioned and harmonious forms. Subjective forms of rhythm characterize his musical, dramatic, and poetic compositions.

His architecture and sculpture become composites and blends of material, form, and color, rhythmical in their proportions and relations.

Let us see how all this bears upon the expressions of the human organism.

Well, place the finger upon the pulse, at the wrist, and note the rhythmus of the heart as it beats. If the body conform itself to this rhythm, you have the sway and movement of the dance.

Again, close the mouth and note the inflow and outflow of the breath through the nostrils. Here a physiological necessity comes in, and you must conform your speech to this play of the lungs.

Thus in speech and song physiological necessity is the basis of rhythm.

(e.) Let it be noted that no great poet ever sang the songs of the people who did not sing them to the rhythm of the blood and breath.

This is why Longfellow used the eight-syllable trochaic verse in "*Hiawatha*," and Scott the eight-syllable iambic verse in "*The Lady of the Lake*." They literally floated their songs down the stream of their age and time upon the blood and breath of the people.

In this physiological necessity rests the secret of the de-

light which sailors, soldiers, and peasants take in the rude ballads which are recited and sung to fill up the hours of the enforced leisure of ship or barrack life.

The normal rate of breathing is eighteen or twenty breaths in a minute, and one or more lines of the ballad or song will use up the air of one natural expiration.

So Nature in the play of her cosmic forces, and in these organic pulsations of blood and breath, leads the way, and man, catching the impulse, marches with measured and rhythmical swing, and adds color and tone to heighten his enjoyment.

Or he liberates the imprisoned air from an hundred mechanical instruments, and lifts his soul upon the wings of music into untold harmonies of sound.

But for his highest form of expression, Nature has concentrated the powers of an hundred mechanical instruments in one Vital instrument, that she may voice the very soul of rhythm. So in moments of concentrated passion he sings in speech and speaks in song, *in correspondence with the subtle and all-pervading Law of the Universe, — Rhythm.*

(f.) This concludes what the author feels to be an inadequate, but he hopes, nevertheless, a suggestive attempt to establish a true basis "in the very nature and analogy of things" for Delsarte's empirical statement of "The Nine Laws of Gesture" that govern human expression.

It will be seen that we have based the whole class of ideal gestures upon the analogies and correspondences existing between the subjective and objective relations which began with our dawning consciousness, and which gather

strength and impressiveness as the Ego more and more sees itself symbolized in external nature, and reads the lessons, and listens to the voices that, through existing correspondences, proclaim its kinship and its destiny !

That other and better unfolding of these laws may be made is quite certain.

That more than nine Laws will suggest themselves to the thoughtful student is probable, but the *logic* upon which these laws stand cannot be shaken so long as the present order and arrangement of things exist: *that the forms and forces of external Nature type, symbolize, and correspond with the spiritual.*

Here we conclude our discussion of general principles. Of the Universe ; its outer forms. Of the controlling Energy which is behind all phenomena. Of man conditioned as a Soul in body, restricted by Space, Time, and Motion, and manifesting his psychic states in terms of his environment. From the general we descend to the particular. We shall consider in succeeding chapters the human form and its fitness for expression ; the expressions of the agents of the Being, the Head, Torso, and Limbs ; and lastly, the expressions of the separate divisions or zones of these agents.

CHAPTER V.

THE HUMAN FORM. — ITS FITNESS FOR EXPRESSION.

MAN epitomizes two worlds, — the world of matter and the world of mind.

He is the apex of organized matter through his body, and the summit of all earthly manifestation through his soul.

In a word, he is a soul in organic form. He is the organized unity of Nature.

His body is the extreme upward limit of physical progress upon the earth.

His soul will yet mark the extreme limit of psychic progress upon the earth.

The excellence of form now possessed by man was in the scheme of animal existence long before he made his appearance upon earth. He is prefigured through the whole chain of Being. All organized forms below him predicted him.

The prediction was yet far from its fulfilment when, in the course of her creative acts, Nature¹

¹ The author wishes it understood that he personifies Nature as acting force, as a convenient term with which to cover all secondary causes of phenomena.

He adopts Argyll's definition, as given in his recent work, *The Unity of Nature*: "A word for the whole sum and system of intelli-

evolved a line of nerve substance, enclosed it within a bony case, and fitted an organism to its environment of water.

Prediction grew into prophecy in the reptiles and reptilian birds. Prophecy became assurance in the beasts of the forest, and in the anthropoid apes. Assurance became fulfilment in man.

The line of nerve substance which Nature had traced in her simplest vertebrate structure, through the slow progress of adaptation in great reaches of time, had now organized itself into a central mass, with smaller masses at points of the human territory; and, marvel of creation, the nerve pulp took hemispheric form, and became the throne of Reason and the special seat of the Intellect.

(a.) Do these words read like unsupported prophecy with poetic coloring? When we wrote these sentences the latest conclusions of John Fiske had not been given to the world.

We quote from his recent volume, "*The Destiny of Man.*" Touching man's evolution, Mr. Fiske says: "At length there came that wonderful moment at which psychical changes began to be of more use than physical changes to the brute ancestor of man. Henceforth the life of the nascent soul came to be first in importance, and the bodily life became subordinate to it. According to Darwin, it is impossible that any other creature, zoologically distinct from man and superior to him, should ever, at any future time, appear upon the earth. According to Darwin, the creation of man is still the goal toward which Nature tended from the beginning."

And this is the great scientist's conclusion: "Not the probable things. The embodiment of all order, the expression of all truth."

duction of any higher creation, but the perfecting of humanity, is to be the glorious consummation of Nature's long and tedious work."

Thus man stands upon the earth,—a mind encased in matter, a spirit in substance, a soul in body. This form, an apparition (that which appears), manifesting (showing its hand), as three conditions of one Being.

Let us examine this form and its fitness for Expression.

And first. The human form holds itself against the downward force of gravity with less expenditure of muscular energy than that of any other land mammal.

In the human structure all arranges itself with reference to static equilibrium.

For, note. The whole weight of the mass stands vertically above the organs of support. This releases the muscles of the head, torso, and arms from the downward drag of gravity.

The head, which in all the large four-footed mammals, as the ox and horse, needs large muscles to hold it against gravity, presses, in man, directly downwards upon the common centre.

And further, note the disposition of the great central organs, the lungs, heart, and viscera, in the cavities of the thorax and pelvis. The whole mass is balanced along the line of gravity.

The body may be regarded as presenting well-defined halves, each half jealously guarding the equilibrium of the whole.

(b.) The student may easily trace the septum, or dividing line of these halves, from the double organ, the brain, evenly balanced in its dome-shaped case, through the cleft of the hard palate.

Then the lungs and heart keep the poise, and the viscera maintain it. The arms and legs help the equipoise and become radii, adding new supports in cases of emergency. Then the more than five hundred muscles, equally disposed on either side, actively guard the balance of the mass.

The human body fulfils what we may conceive to be Nature's design : —

To place upon earth a being who should hold its mass along a vertical line against the levelling force of gravity. Should, in its escape from the degradation of gravity, avoid friction in movement. Should thus reduce weight and friction — the opposing elements of its freedom — to the lowest point consistent with size and strength.

So, as among vertebrates, the reptiles represent the line of greatest inthralment to gravity and friction, man represents the line of greatest enfranchisement.

We may formulate our conclusions regarding the evolution of animal structure in a law.

The Law of Animal Structure : —

In animal proportions the predominating mass is disposed along the horizontal line.

In human proportions the predominating mass is disposed along the vertical line.

(c.) Thus all animal life may be represented as included within the two lines forming a right angle. The horizontal line is the line of greatest inthralment; as the animal rises

in the scale of being, it approaches the vertical in structure.

And man, by the law of structure, may be pronounced the highest earthly organism, and justifies the ancient definition of him : —

“ Man is he of the upturned face.”

We are indebted to that marvellous race, the ancient Greeks, for our ideas of proportion and symmetry of the human form. For nearly three thousand years the antiques, Apollo and Venus, have been accepted in the world of art as the highest ideals of the human form. Æsthetic taste is satisfied when one looks upon these incomparable ideals of strength, beauty, and proportioned harmony. Even if one does not reason about it, the *feeling* is that here is perfection of form.

If one stops to analyze his feeling, he discovers that a large part of his satisfaction rests in a gratified sense of equilibrium or poise; and in the inference that if the statue could step down from its pedestal it would move with ease, safety, and strength.

Delsarte is reported to have used the term “Grace” to cover a trinity of elements that must be presented, in a statue or in the human form, to make a unity or highest form of Expression.

This is the reported formula : —

Law : The human form has Grace in expression when it combines, in unity, the three elements of Ease, Precision, and Harmony.

In this analysis he made ease to express the Vital nature, precision the Mental, and harmony the Emotive.

If either of these three elements is too prominent, the unity of the expression is destroyed. Thus if (1.) *Ease in human gesture be too prominent, the expression becomes first assurance, then familiarity, and at last vulgarity.*

So intoxication is ease let loose.

(2.) *If precision be too prominent, there is pedantry.*

Pedantry is precision running in grooves. Ease, speaking from the Vital Being, would ask with abruptness, "Who is the young cross-eyed?" Precision, with definiteness, "Who is the young person with the slight obliquity of vision?"

(3.) *If harmony be too prominent, there is affectation.*

Harmony is too close an addiction to curved lines. Emotive æstheticism seeks too many lines of beauty.

When the three elements, ease, precision, and harmony, exist in poise, we have the highest form of expression, — Grace.

(d.) It would be strange if the Exterior did not conform to the Interior. So we find that the body confirms the above psychological analysis.

Two sets of muscles control all our movements, — extensors and flexors. Acting in sympathy, they poise the body, or place it in stable equilibrium.

Now an excess of either of the three natures, Vital, Emo-

tive, or Mental, will inevitably manifest itself in the manner we have indicated.

The student is asked to ponder deeply the significance of these manifestations of the Being. We have proceeding from a single undivided essence three forms of expression, each having its distinctive characteristics, and, as will be found, each choosing the ground of its display in some tract or division of the body.

Take an illustration from the pages of the great English painter of the moods, morals, and manners of his age and time. Let the student construct the action from the graphic picture of the Vital nature let loose:—

“A big, loud man with a stare and a metallic laugh. A man made out of coarse material, which seemed to be stretched, to make so much of him.

“A man who could never sufficiently vaunt himself a self-made man. Always proclaiming through that brassy speaking-trumpet of a voice his old ignorance and his old poverty.

“‘I had n’t a shoe to my foot, sir; as to a stocking, I did n’t know such a thing by name. I passed the day in a ditch, and the night in a pigsty.

“‘That’s the way I spent my tenth birthday! Not that a ditch was new to me, for I was born in a ditch!’”

Take a second illustration. It may be said that all great orators move out from the psychic centre into the audience over three divergent lines.

Like generals who hold the reins of three armies, they have learned that three natures can move along the lines of attack. The question becomes, then, a matter of forces to be brought into action. Whether will the general more surely conquer with one army or with three?

Both the greatest American preacher, Beecher, and the greatest English preacher, Spurgeon, are powerful before the people, because they have control of three well-proportioned and generously large natures, with the Emotive leading, a strong Vital to sustain, and from the Mental side of

the Being, more especially in Beecher, a wonderfully vivid imagination and conceptive power of the highest order.

Most preachers have but one army to bring into action. It is an army of syllogisms. The attack is along the frigid line of the Mental. Two armies are meanwhile idle in their tents. The attack lacks blood and breath.

Said the great Welsh preacher of the last century, Christmas Evans: "Never raise the voice while the heart is dry!"

The architecture and sculpture of different peoples verify these deductions.

Primitive man made the rudest possible resemblances of objects, and his forms of architecture were masses of rocks of irregular shapes, showing that Vital instincts rather than premeditated design prompted the manifestation.

In Assyrian and Egyptian architecture precision and strength ruled, and gigantic figures with Vital calm in the faces, and great temples hewn out of solid rock, testify to the Mento-Vital elements which rule these manifestations.

Greek architecture and sculpture present the highest forms of expression that have yet appeared upon the earth. Greek forms must be for ages the inspiration of art, for they present blends of the three elements, ease, precision, and harmony, in perfect poise of proportion and symmetry.

(e.) It is a little curious that the drawings of the man of the quaternary period, of the present races of savages, and of all civilized children present the same characteristics of crudeness and want of precision. They are all in the Vital stage of human progress, and they each would

represent, say, the picture of a man in the same crude way, namely, a circular form for the head, a triangle for the torso, and straight lines for the arms and legs.

So, in the Vital age of the world, the Assyrians and Egyptians filled their colossal figures with an intense and impressive Vital force.

In conclusion, Delsarte affirms an added element. He is reported to have said: *Perfect gesture requires Reason, in addition to Grace.*

The elements of Reason are Power, Wisdom, and Love, and they dwell in perfection only in the Spiritual.

(f.) This conclusion of Delsarte calls to mind an utterance made to the author by Wendell Phillips. Said this poised orator from the Greek age appearing in our nineteenth century in America: "He only is a *great* orator who can utter Reason without Passion."

CHAPTER VI

THE HUMAN FORM: ACTION AS DETERMINED FROM THE BASE.

IN the Arts of Speech — Reading, Recitation, Personation, and Oratory — the human form, whether in poise or in action, has a single office, namely, to show forth the interplay of soul and body.

So Delsarte's definition of gesture is essentially an art definition : —

The manifestation of the Being through the activity of the body.

And this manifestation is always made through motion ; or through form, which is an arrest of motion.

(a.) The expression which form presents is doubtless due to the subjective process by which we endow the form with the attributes of life.

We infer that some mood has just given motion to the form, and we seem to see the mood through the arrested form.

It is doubtful whether any other animal than man recognizes life in any other way than through motion.

Thus from Utility — service of the body or any of its organs in the animal economy — Art

looks to Expression, the significance of body, or organ, in the æsthetic economy.

Important as are the sense organs, grouped in the small space of the face, in the economy of Life, they become the most expressive agents in the economy of Art.

A thousand uses has the hand! A coarse animal tool in the savage, in the civilized man, tools proceed and arts radiate from the ten separated fingers.¹ Garth Wilkinson concludes that the highest use of the body on this earth is to enable the Soul to personate itself in a world of dead matter.

And it would seem that Nature has reached her ultimate goal, spoken her last organic word, in her presentation upon earth of Expressive Man.

And we may confidently conclude that the evolution of man as an expressive being has been a constant and progressive development along the three parallels of Structure, Function, and Utility.

(b.) A diagram may assist the student to gain our idea of how, in the course of human development, structure, function, and utility have steadily moved on towards their culmination in Expression.



¹ All human art is but an increment of the power of the hand. Vision and manipulation in their countless and indirect forms are the two coöperative factors in all intellectual progress. — JOHN FISKE, *The Destiny of Man*.

So far as we know, no life has appeared upon the earth outside a material form. A structure is essential to the appearance of life, and always accompanies such appearance.

But appearance is not maintenance. When life has appeared, in order to survive, it must be able to maintain itself against the forces that would destroy it. Hence the provision Nature has made of organs. And it is the action of the organ to maintain life against opposing forces that we call its function. It is the function of the heart to beat, the lungs to heave, the stomach to digest, the eye to see.

Both structure and function, in every animal upon earth save one, completely answer their ends when they give outward expression to life, work in its service, protect it, and perpetuate it through other similar lives.

This is the perpetual round of structure and function in all the lower animals. All this adaptation to environment ends with *Utility*.

And man is man because in him all the organs of the animal are lifted into the highest significance. In him structure, function, and utility serve a Soul.

And so human expression evolves from structure, function, and utility, as naturally as the flower from root and branch, stem and bud.

Emerson has somewhere said: "What Nature at one time provides for use she afterwards turns to ornament;" and Spencer, after quoting these lines of the great idealist, says: "It has often occurred to me that the same might be said of the progress of humanity."

Structure, Function, Utility, Expression. In these terms we quote all the words of Life.

The possibilities of each animal are predicated along these lines of development; and we may read the history of man's progress toward the spiritual in the syntheses presented through the whole chain of animal existence.

Hence, Oken has called man the panæsthetic animal. And we may say without violence that the animal kingdom is only a dismemberment of the highest animal, man; and that animals become nobler in rank, the greater the number of organs that are collectively liberated, or severed, from the grand animal, man.

(c.) In the vertebrate kingdom there is no change from the structural type. All changes are made through constant differentiation.

And we may confidently state three things in three propositions as true of each and every animal upon earth:—

I. *Structure determines the kind and amount of motion possible to the animal.*

II. *Function is determined by the kind of organs possessed by the animal.*

III. *Expression is an outgrowth from structure and function, and appears in no other animal except man as a conscious act of the Being, and hence is determined by the kind and amount of the Psychic element.*

We trust that the student will be led to examine the base upon which the human form stands with a new interest, as we consider its relations through structure, function, and utility, to expression.

Agassiz defines the foot of a primate, to which order of the class mammalia man belongs, as a limb terminated by digits, all on the same level, and all having the same direction.

But Broca, the French anthropologist, with more breadth, thus defines the human base:—

.. A foot is an extremity which serves chiefly

for standing or walking, and a hand is an extremity which serves chiefly for prehension and touch.

The foot is perfect when it answers the ends of standing and walking.

And the hand is perfect when it answers the ends of prehension and touch.

But to fully discover the functions of either hand or foot it is necessary to examine the structures as wholes of which they are parts.

Three conditions of structure fit all land mammals for locomotion.

(1.) A shaft-like bone must be received into a deep hemispherical cavity looking downwards and outwards.

This structure allows the limb to move freely in two directions, — from before, backwards, and from behind, forwards, — thus giving the to-and-fro movement of locomotion.

The legs of animals are vital pendulums; they mark distances on the dial face of time. At this point all other movements except the pendulum are very limited.

(2.) Two bones more or less united are jointed with the shaft-like bone. They act as a single bone, in order to better sustain the weight of the body and keep the foot from turning.

(3.) The jointings above the part touching the ground allow two movements, — flexion and extension, — and should form with the foot a near approach to a right angle, so as to present a flat surface to the earth.

We have thus presented Nature's general plan of structure to serve locomotion for all land mammals.

All land mammals, save man, touch the earth with four shafts, or levers.

In man, two of these shafts are set free. This fact will be found to have an immense significance. It correlates with all the other facts that mark man's supremacy upon the earth.

It makes possible a new definition of man :
The animal that has both feet and hands.

Through the two only does he attain freedom.

(d.) It is not, as has been imagined, the hands, as hands, that confer nobility upon man. For physically they cause the loss of half the power of standing and moving.

But in man there are hands *and* feet, that the two functions of touching and standing may each approach a possible perfection.


Should both hands and feet exercise the sense of touch, the motion is impaired. Should both move the body, the sense suffers.

So the feet support the body, and stand in its service. The hands are supported by the body, and stand in the service of the soul.

The four hands of the anthropoids are therefore an imperfection and a limitation, which we need not envy them.

If we would represent the ruling proportions of the animals next man, the quadrupeds, we project an horizontal line ———, and imagine mass disposed along that line.

If we would represent the ruling | propor-
 tions of man, we project a vertical line, | and im-
 agine mass disposed along that line.

And we can represent all animal life along
 the angles made by lifting the horizon-
 tal toward the vertical. *It is upon the*
implications and revelations of devel-
opment along these lines that we find the ration-
 ale of Delsarte's

LAW OF RADIATIONS.

Law: Animal Radiations are downwards.
Human Radiations are upwards and out-
wards.

(e.) It is difficult to comprehend the full significance of this release of the two levers, — the arms and hands.

But it seems apparent that he who was to epitomize the universe, group all its material forms and forces in his body, reflect and type the spiritual through his soul, must be able to assume the vertical, and to project radial lines in all directions into the spaces around him.

If, as Oken has somewhere finely said, God thought the whole thought of creation once more, and that thought was man, surely this bearer of all dignities must lift his face from the earth, stand in conscious equilibrium, and realize all the conditions of movement and balance in the highest degree.

Let us see how man realizes these conditions of poise and motion.

We have already considered Nature's general plan of structure for poise and locomotion in all mammals. Let us note the significance of the

differentiation in man from this general structural plan.

(1.) In the human structure, the thigh bone is a shaft fitted to play easily in its cup-like cavity, giving considerable freedom of movement at the hips.

It easily executes the pendulum movement in walking, and (a high consideration in art) it permits the right and left leg each to describe 180° of a circle, — a performance impossible to any other mammal.

(2.) Two bones are jointed at the knee with the long shaft of the thigh.

These two bones act as one, and form a shorter second shaft, capable of a quicker pendulum movement.

(3.) These two bones fall vertically upon the crown of an elastic arch of wonderful strength and lightness, forming a loose hinge at the jointings of the ankle, which allows considerable freedom of movement.

The arch forming the foot rests upon two points of support, — the strong, knob-like bone of the heel, and upon the bones which form the ball of the foot.

(*f.*) Thus, together with all the mammals, we find man bound to the earth. With all other mammals the four shafts radiate downward, and are Vital in significance. With man, the two shafts that touch the earth have the same significance. They are Vital. Their primary office is locomotion. But psychic faculty and instrument of faculty keep pace in development, and the lower limbs are now supports to lift the expressive body into the vertical.

We shall find sure and certain evidence that the released levers, radiating outwards and upwards, become the special and significant agents of the Mental and Emotive Being.

It was rare insight in Delsarte that put into formulæ these deductions, based in the revelations of the human structure, as

THE THREE GRAVITATIONS.

Man gravitates to the Earth through his feet.

To Humanity through the torso.

To the Universe through the eye.

CHAPTER VII.

THE HUMAN FORM CONTINUED. — STRUCTURE AS DETERMINING ACTION. — INDICATIONS OF THE FEET.

WE examined in our last chapter the base upon which stands the only animal capable of sustaining the mass of its body along the vertical line.

To hold this mass against the force of gravity in equilibrium, and in its action to combine the elements of stability, strength, and freedom, three difficulties arising from structure must be surmounted.

These difficulties are: —

(1.) *The narrowness of the base upon which the structure stands.*

(2.) *A formidable difficulty: the height of the centre of gravity above the base.*

(3.) *The projection of the parts, above and away from the line vertical to the centre.*

How the genius of a race, through its representative artists, overcame these difficulties in presentations of the human form, the Greek sculptors have shown the world in their incomparable statues, which present to the eye that

exquisite harmony of form, which we term graceful; that combination of the elements of physical power and mental strength in poise, which we call commanding or heroic, and which arises from a perfection of proportion and symmetry which takes away all fear of sufficient firmness of support.

(a.) We present here the technical rule formulated by Da Vinci for posing statues. The student will note that this rule applies to the living static form as well as to its representations in statues.

“The foot which at any instant sustains the principal weight of the mass must be so placed that a vertical line let fall from the middle point between the shoulders, known as the little well of the neck, shall pass through the heel of the foot. The other foot acts as a lever to keep the mass balanced and prevent it from tottering.”

The living, moving human form overcomes the three difficulties mentioned above by a marvelous adaptation and play of vital mechanics; of levers, blocks, hammers, wedges, of ropes and pulleys, of arcs, pillars, cushions, shafts, of the most ingenious complexity and entire adaptability.

(b.) We may well uncover our heads and stand in awe, as with the vision of inference we count the steps by which the spiritual perfected itself in this last appearance upon earth, — Man.

From the simplest vertebrate structure, — a prone line of bones with an enclosed thread of nerve matter, all parts of which were bound to earth by equal pressure, — through fish, reptile, bird, and beast, this vertebral column had lifted itself towards the vertical through long lapses of time and by constant differentiations.

We may imagine that—in the dim twilight that pre-saged the appearance of man—Nature paused for a moment from her creative work to consider; when, one day, an anthropoid, type and promise of the hair-clad speechless man, who was to make way for the speaking and knowing man, threw upwards and backwards his arms, swept with a dazed look for an instant the circle of the horizon, approached for a moment the vertical, then fell back on all fours!

Our good earth mother pondered. Then she said: “Let us stand this column of bones upright. Let us throw out from this central axis a series of arcs facing backwards and forming a channel, and let us fill this channel with life or nerve matter.

“Now, we will throw out from our axis a second series of expanded arcs facing forwards, making a strong bony box, in which we will place heart and lungs, the organs of blood and breath.

“And yet a third cavity, let us fashion, at the lower terminus of the column, where we will place the organs for the sustaining and perpetuating of life, that this being may not perish from the earth.

“Now, we will surmount this structure with some closed arcs, taking the form of a sphere, that we may symbolize the round earth which is to be the theatre of this being’s activities, and which shall teach him many a lesson of correspondence.

“Let us fill the dome of this sphere with white and gray nerve matter curiously folded, and below let us build seven gateways, opening outwards, but leading inwards. At the portals of the gates let us place seven trusty servitors, that all the appearances of the outer world may become the experiences of the soul, that this, my greatest work on earth, shall live, know, love, and worship.”

Then Infinite Wisdom, Love, and Power breathed upon this form, and it became Man, the image of the Spiritual: to rule the world of matter, to organize science, to perfect art, to extend commerce, to evolve literature, to found communities, to establish morality, to further the humanities, to worship the Infinite One.

Let us summarize our deductions drawn from structure and function, as presented by the land mammals.

I. *In the land mammals, nearest man, the four lengths, shafts, or limbs have but a single function, namely, to further the activities of the animal in the struggle for existence.*

Their expression is wholly Vital. Their use is for locomotion, defence, and occasional prehension.

II. *In man, while the two lower limbs retain their vital function, the two upper limbs are released. Unlike any other mammal, with man the two shafts perform the office of locomotion and hold the mass against the attack of gravity.*

III. *The two shafts thus released (the hand and arm) are with man structurally united with the head, while with all other mammals they are structurally united with the body.*

And — most important conclusion — this freedom of the expressive agents, the hand and arm, unlocks the human face, and makes it the highest bodily correspondence of the Emotive nature.

(c.) It is important here that the student shall recall our statement of the central law of the Being : —

Man is one in consciousness ; three in manifestation.

The dominations of the three natures are made visible through the body by motion and form. Hence the positions and movements of the feet disclose the ruling states of the Being.

Delsarte divides the foot into three divisions: front, middle, back.

I. When the Vital nature dominates consciousness, form and motion are eccentric, and the weight of the mass is thrown upon the front foot.

II. When the Mental nature dominates consciousness, the motion is concentric, and the weight of the mass is thrown upon or towards the back foot.

III. When the higher moods of the Emotive nature dominate consciousness, there is equilibrium or poise of motion, and the mass is disposed along the line of gravity, and is thrown upon the middle foot.

(d.) It was said of the great naturalist Owens that by the aid of the fossil bone of an extinct animal he could construct the entire form as in those dim ages it walked the earth.

And it was through a like power of inference that Lavater said: "Hide the man all but his feet, and I will disclose him to you."

Said Bruyère: "The way a man takes his hat from a peg shall make him known."

We give a series of nine indications of the feet as showing ruling conditions of the Being.

I. *Feet placed a little apart and pointing directly forwards indicate rusticity, boorishness, clownishness.*

(e.) Let the student take these positions and construct the figures¹ that the positions imply. He will find little difficulty in giving some color of reality to his concepts.

¹ Art is constructive. She suits her forms to her premeditated

Such is the unity of the organism that inference builds a whole from a part.

Thus in the figure constructed above the feet as placed in our first example; awkwardness and self-consciousness arising from the Vital nature must impose awkward form and awkward gestures; even the voice will reflect awkwardness by its coarse quality and clumsy articulations.

And why not, if the body be the visible and actual correspondence of the Soul?

II. *Turn one or both feet inwards, and the awkwardness disappears.*

(f.) This position will be instantly recognized as "out of nature." So the immediate comment is, "Here is physical deformity." And our sympathy robs the indication of awkwardness.

Besides, Nature delights in her "Law of Compensation." And she almost always gives brilliant Mental qualities — though not so uniformly Emotive qualities — to her club-footed and hunch-backed children.

In the old Lyceum days no one thought Henry Giles *awkward*, when with his club-foot he stumped about the platform, with his soul aglow as he discoursed of the characters of Shakespeare's plays.

III. *Feet close together, knees slightly bent, indicate want of assertion, fear of giving offence, self-distrust, timidity.*

(g.) The different phases of passion shown by this indication have been in all ages a fruitful mine of wealth for dramatic situations.

and selected environment. This is especially true of Dramatic Art. Thus the impossible (in nature) stage Yankee, or Englishman, or Irishman, is suited to his environment of canvas, gas light, and emphasized scenic effects. So the highest aim and effort of the dramatist is to construct, out of a thousand examples of natural display, an art display in which a vivid sense of reality may pervade the creation.

The amount of "business" that an ingenious actor will introduce in personating the timid, distrustful lover is something wonderful.

The novelist delights in such representations as Mr. Toots, in *Dombey and Son*, going to propose to Miss Dombey; where the bashful lover's timidity and utter self-distrust is sketched under the figure of continually falling into and floundering about in a well.

IV. *Feet wide apart, weight thrown equally upon both, or change of weight from one to the other, indicate pomposity, bluster, bragging, bravado without bravery.*

Add motion, and we have strides, swagger of head and torso.

Add voice, and we have loud and blustering tones, with wide slides but without real force.

(h.) We need only refer the student to Shakespeare's great creation of Falstaff. It is impossible to read the lines, so perfect is the dramatic unity, without constructing form, action, and characteristics.

V. *Feet considerably separated, weight thrown on advanced foot, indicate courage, earnestness, eager attention, listening, desire.*

VI. *Feet considerably separated, weight thrown on retired foot, indicate fear, retreat, defence, preparation for flight, disgust, horror.*

VII. *Frequent changes of feet indicate psychic disturbance. Light, purposeless, and inconsequent movements indicate light, purposeless, and inconsequent moods.*

VIII. *Short, tiptoe steps indicate secrecy, caution. Starting from the base indicates sud-*

den fright. Stamping indicates harsh authority.

IX. *Feet placed in accordance with Da Vinci's technical rule for posing statues (see page 108), body drawn upward along the vertical line, torso advanced and slightly expanded, indicate that some grand mood is dominating consciousness, such as a love of justice, truth, or duty. It is the poise of the outer indicating the highest domination of the Emotive nature.*

(i.) This disposition of the agents gives the grandest expression possible to man. It indicates the triumph of the Soul over all opposing forces.

We will add a tenth indication as the antithesis of equilibrium or poise of the agents.

X. *The negation of expression, the language of vacuity.*

A human house without a resident, a human form without rectitude. Less than the animal, which is guided by that inflexible reason which we call instinct. Sad text, comment, and illustration of our theory, that the exterior is type and symbol of the inner. Here all the agents express — nothing! for there is no thing to express.

What Being is this whose indications are negation, vacuity, aberration, semblance merely?

It is the idiot. The vacant gaze of matter toward the Spiritual!

CHAPTER VIII.

THE TORSO AND ITS EXPRESSIONS.

THE term Torso had its origin in the fertile soil of Greek art, and received emphasis from the early Italian sculptors, who made their studies of the human form after the analyses of proportion and symmetry left by the Greek philosophers and sculptors.

The root word from which we derive the word torso signifies "twisted," and the idea doubtless arose from seeing a tree stripped of its limbs, and standing, gnarled and twisted, a headless trunk.

(a.) In theoretic art the torso is composed of the body without head or limbs ; but in art representations a part of one or both arms (not forearms) usually graces the otherwise inexpressive trunk, and suggests the play of the shoulders.

*The Expression of the torso as a division of the body is Emotive ; as that of the head is Mental, and that of the limbs is Vital.*¹

(b.) It is curious that a similar division of Outer and Inner is reflected in Greek art.

The Greek philosophers, Aristotle and Plato, taught a four-fold nature of man.

¹ This is Delsarte's division, as reported by nearly all his representatives in America. Here, as elsewhere in our treatise, we use the term Emotive, instead of the confusing and unphilosophic term Moral.

1. There was the Inner Essence, or Soul, which was indestructible.

2. The Animal Soul (also essence), but grosser spirit, — the instincts and passions, as in the brutes.

3. The Physical Nature embodied. An inner form of matter, not seen by the eyes; sublimated matter. This was the direct agent between the soul and body.

4. The Outer, Visible, and Sensible Body, or Phenomenon, composed of gross matter.

The Greek philosophers made the head the residence of the pure essence or Soul. The torso was the seat of the grosser spirit, or animal Soul. The upper part of the torso — the thorax — was the seat of the nobler passions, with the heart as its centre.

The lower part of the thorax was the seat of the baser passions, while the abdomen was the residence of the gross appetites and sensual passions.

And this philosophy dominated their art forms,

The gods of the Greek were idealized types of the human form.

The brow of Great Jove was high, broad, and with the facial angle brought forward. The features were in poise, impassive but full of conscious power. The head was an outline of massive strength. Thus the Greek concept of a god was an apotheosis of the Vital and Mental natures of man.

On the other hand, the face and brow of Apollo are characteristically human. The elements that

marked the head and face of Jove as the features of a god are modified and humanized. The facial angle is not brought so far forward, the features have lost their massiveness, and the impassive poise has given way to suggestions of motion. It is the Greek concept of man. Still the Vital and Mental predominate, with almost no trace of the higher Emotive.

Note, in the form of the gladiator, the embodied Vital and Mental natures. The thorax, full, deep, and well set; the muscles like bands of steel.

Mark, too, the animal significance of the bloated abdomen and bulging thighs of Bacchus, and the half-human, half-goat forms of the Satyrs.

(c.) The Greeks were constantly solicited to the study of art, especially of form and motion, by the most suggestive and picturesque aspects of Nature, and by the most perfect types of the human form, always present to them, and moving with a freedom and grace unknown to modern times. So the Greek analyses of proportion and form, more especially as illustrated in architecture and sculpture, must long continue to rule in the realm of Art. It would seem the part of wisdom to accept the keen insight and prophecy of the most advanced race — certainly the most advanced in art — that has yet appeared upon the earth.

So, if we discover in the physiognomists Lavater, Alex. Walker, Redfield, Huatt, or with the art writers Winckelmann, Lübke, Ruskin, or such illustrators as Hogarth and Doré, or such teachers of Expression as Rimmer and Delsarte,¹ an intimate sympathy with Greek ideas, when con-

¹ A fragment left by Delsarte, and entitled *Episodes in the Life of*

fronted with the problem of human expression as a result of the mysterious union of spirit and matter, we may recall with a definite satisfaction the utterance of Paul, the great apostle of Christianity, that

There is a natural body,
And there is a spiritual body.

The torso is centre of the body, and its centre, the heart, is popularly considered the centre of the Affections and deeper Emotions.

(d.) It is not without reason that we speak of the heart as centre of our deepest Emotions. While as a physical organ it is insensible to the touch, it is so connected with the nervous system that all our intense *physical* pains or pleasures increase its action.

Intense psychic states find immediate response in the violent beating of the heart, and seem to our consciousness to locate themselves in the organ itself.

We cannot set aside this popular verdict. Such phrases as "it will break my heart," "my heart leaped into my mouth," or Shakespeare's reference to Cæsar, "then *burst* his mighty heart," show the strength of the popular belief that *the heart is the centre of the Emotive Being*.

a Revelator, is a most convincing evidence of his methods of study. The persistency with which he observed, and the power of analysis which he brought to bear upon all psychic phenomena show conclusively that he adopted what is now known as "the scientific method." *His laws were deductions from observed phenomena. In this rests their value. How* it is expressed always preceded *the why* with him.

So his statements seem empirical and often fanciful. Thus, in stating how two persons look at a picture, he says (p. 82, *Delsarte System*, Werner, Albany, N. Y.): —

"When a painter examines his work he moves away from it perceptibly.

"The picture dealer examines it closely, and with a magnifying glass in hand; *but this direct vision is a short and limited vision.*

"The painter, by moving away, seizes, by *synthetic vision*, the *harmonious proportions of his work.*"

In Expression, we divide the torso into three zones, — the Upper, Middle, and Lower.

These zones indicate through form and motion the state of Being ruling in consciousness. They are also points of arrival or departure for gestures of the hand and arm. Let us consider the language of each zone.

II. *The upper torso contains the lungs, the organ of our breath, as the heart is of our blood.*

Gestures directed towards, or from, this centre disclose the Mental nature as ruling.

(e.) It will be noticed, as bearing upon Expression, that while the action of the heart is not in the least degree controlled by the will, our breathing can be instantly controlled. But the acute physical distress that follows too long a retention of the breath — the sensation of stifling — is one of the most terrible of our experiences.

It will be readily seen that this *control of the act of breathing* allies in-breathing and out-breathing with the Mental nature, *as the loss of all control over the action of the heart* allies its motions with the Emotive nature. So the *objective* fact that we can control the action of the lungs corresponds with the *subjective* fact that our controlled states show themselves through form and motion of the upper torso.

So our breathing becomes a representative phenomenon. It is to our action what words are to our thought. If we hear the breathing we know the character of the act.

These considerations make credible the affirmations of Garth Wilkinson, "that our Mental nature walks up and down through the arches of our respiration," and that "every man requires to educate his breath for his business."

III. *The middle torso is the zone of the*

Emotive nature. It is the seat of the affections and higher emotions.

Gestures towards or from this centre disclose the Emotive nature as ruling.

(f.) We have already stated, in paragraph (d), our reasons for making the middle zone of the torso the seat of the Emotive nature. So fixed is the correspondence in human nature that any other conclusion would be negatived by the gestures of all races of men upon the earth.

I. *The lower torso is the zone of the Vital nature. It is the seat of the appetites and lower passions.*

Gestures towards or from this centre disclose the Vital nature as ruling.

(g.) We have the same popular conviction that the abdomen is the seat of the grosser appetites and baser passions that sustains the idea that the heart is the seat of the affections and higher emotions.

Here are the stomach and other organs of digestion. And the same reasoning upon the *objective* facts of structure and function that brought us to conclude that the middle-torso is the zone of the Emotive nature drives us to the conclusion that the lower torso is the zone of the Vital nature. Said Broussais: "The passions are the triumph of the viscera over the brain."

It is not necessary to locate a residence for a state of Being in any place or in any organ of the body. But we can with confidence assert—and ordinary observation will convince any one who may doubt—that certain states of the Being manifest themselves, and seem to do so by preference, through certain divisions or zones of the human territory.

(h.) This idea accredited to Delsarte will be found to form the basis of the system of physiognomy of Lavater. We quote that profound observer : —

“These three states of the Soul do not lodge in separate apartments of the body, but coexist in every point, and form by their combination one whole. Yet it is true that each of these principles has its peculiar place of residence in the body, where it *in preference* manifests and exerts itself.”

In view of the fact of a general uniformity of Expression through these zones, common to all races and to all individuals of any race, as well as the fact that, through correspondence, these zones are made points of arrival and departure for a great number of gestures of the hand and arm, the author feels justified in the conclusions arrived at, which we will put into three propositions.

I. *We may say, speaking broadly, that the torso as a whole manifests the Emotive state of the Being.*

II. *Each of the three states of the Being manifests itself, as if by preference, through a special division or zone of the torso.*

III. *Each zone speaks its own language, and not the language of another.*

(i.) To the student who accepts the formidable array of facts, marshaled in such logical order by Darwin in his great work upon “The Expression of the Emotions in Man and Animals;” or who has weighed the convincing testimony of Mantegazza, an eye-witness, who has made the globe his quarry for data of human expression, — to such a student it will seem entirely probable that the great body

of gestures now used by us to express psychic states were once of use to our remote ancestors, in the struggle of the survival of the fittest.

Another great source of our expressions, undoubtedly, is to be found in the reasonings upon natural phenomena presented to the undeveloped minds of primitive men. Thus, primitive man saw that when the breath was out the man died. So the breath was thought to be the Soul. He saw the thorax heave in the last efforts of life to maintain its hold upon the body, and when motion ceased, and all was still, the alarming thought came to him that the man within the body had gone out from his residence. And this was fair reasoning from the data presented to his undeveloped mind. He pushed inference one step further. "He will return," he said, "and be hungry;" so he put food upon the hearth-stone, and waited with a weary and pathetic patience.

So, too, it was quite in the line of fair inference that the heart, with its warmth of red blood and stir of life in its rhythmical pulsations, should be considered the residence of the warm feelings and generous passions. The affections — judging from outward manifestations — seemed to dwell in the heart.

The grosser offices and functions of the stomach and visceral organs connected with digestion suggested that the vulgar appetites and coarse feelings made this zone the seat of their activities. They were often personified, and dwelt like real beings in this lower zone of the torso.

And with ourselves of this age and time, these crude and objective ideas have become subjectively refined and wonderfully expressive; and through correspondence and analogy, through heredity and life experience, we emphasize and repeat our states of feeling by gestures directed to or from these zones.

What wonder that language, getting its greatest strength and vigor from objective sources, and never so strong and vigorous as when it can hold before the mind's eye the

form and motion of the actual object, delights to perpetuate these correspondences?

The student may well ask, with all sorts of confident support "in the nature of things," "Does all Expression rest in Correspondence?" And can we not confidently say that the sensations of the heart, lungs, and viscera, which are the seat of our greatest physical pains and pleasures, are reflected subjectively in voice, gesture, and speech?

We find space for two illustrations of the expression of the three states of the Being through the three zones of the torso. In our first illustration the gestures are directed towards or from the Mental and Emotive zones.

Our first illustration is from Shakespeare's Henry V., Act II. Scene 2.

The King has discovered the conspiracy of Cambridge, Scroop and Grey.

Let the student recall the order of action of the threefold Being. In psychic action *the Mental guides, the Emotive impels, the Vital sustains*.

Now, let us apply this order of action to the lines which we quote on the next page.

The Mental takes note of existing relations, as of king and people, notes consequences to the state, duty of king as judicial head, dignity of king as representative head, the enormity of the crime, the punishment due, etc.

The Emotive gathers its strength from the instinctive and animal roots of the Vital nature. It becomes impulse to the *severity* of justice. As affection it will temper justice with

mercy. This outflow of feeling invading the Mental nature will give rise to that sense of right and wrong which in man has become organized as conscience.

The Vital sustains all and urges action. The simplest organism, as the monera or other protozoan, is always composed of centre, in which resides life, and near environment or body, which is controlled by its centre. This life element in man is at the foundation of the psychic structure.

*"K. Hen. God quit you in his mercy ! Hear your sentence.
You have conspired against our royal person,
Join'd with an enemy proclaim'd, and from his coffers
Receiv'd the golden earnest of our death."*

Gesture of hand and arm towards the upper torso upon the words "our royal person."

Gesture of hand and arm towards the middle torso upon the words "golden earnest of our death."

Here the state of Being is the higher Emotive as ruling. The mode of motion is poise for the whole body, concentric for hand and arm, eccentric for torso.

Take a second illustration. The comment of the three natures upon a glass of wine.

The Emoto-Mental would hold up the glass; look at the color and transparency; note the stir; move the glass to and fro under the nose; make placid the features; close gently the eyes; smack the lips with scarcely audible sound; talk

and taste, taste and talk about vintage, age, ancestry ; call it "rare old Burgundy or royal Tokay ;" sip, taste, and talk, and talk again in endless disquisition.

The Vital is entirely straightforward in its manifestations. It takes a tankard in place of the glass, and the malt delight of Gambrinus in place of wine. Round and round, with half-closed eyes, it stirs the foaming beverage. There is little time wasted in æsthetic observation of color or motion or bouquet ; tasting loses its finesse in hearty deglutition. So the Vital drinks for the stomach instead of the palate ; stirs the tankard in Falstaffian rhythm ; drinks "with windy suspiration ;" smacks the lips ; strikes with both hands the abdomen ; shows satisfaction in inarticulate and sometimes porcine sounds.

In noting the expressions of the torso through form and motion, let us recall the three divisions which include all gestures, and which the student will find discussed at length under the Law of the Personality : —

1. Bearings refer to carriage or mien. They are the result of heredity, or long-continued habit. They are permanent, and indicate character.

We grow insensibly into bearings.

2. Attitudes are arrests of motion. They are comparatively passive, and show that some particular mood is dominating consciousness.

We put ourselves into attitudes.

3. Inflections are fugitive, instant, or present forms of gesture. It is the mood now ruling that they express.

We are only semi-conscious of our inflections.

So it will appear that an inflection may show at any moment through the exterior. One can throw himself into an attitude. He can fix himself in a posture. His bearing, or mien, comes through repetition of action, — his own or that of his ancestors. The form and motion of the torso, then, will disclose the state of the Being dominating consciousness.

We give a series of three attitudes of the torso, and ask the student to carefully consider their language : —

(1.) *Expansion* : Here both the form and motion indicate different degrees of vitality, power, courage, vehemence. The Will active.

(2.) *Contraction* : Both form and motion indicate different degrees of struggle, effort, pain, convulsion. The Will spasmodic.

(3.) *Relaxation* : Both form and motion indicate different degrees of want of vitality, indolence, prostration. The Will inactive.

We give a series of three Inflections of the Torso : —

(1.) *Movement up and down in a vertical line indicates* : Despair of the weak, distracted grief, loss of courage and hope.

If the voice is used it takes the minor key, — through all animal life the symbol of pain.

(2.) *Side to side movement indicates*: Happy innocence, joyousness, carelessness, thoughtlessness of childhood.

If the voice is used it takes the major key, — through all animal life the symbol of pleasure.

(3.) *Twisting movements indicate*: Childish impatience of all degrees.

If the voice is used it takes the form of the vanishing stress.

(c.) It will be noticed that these gestures are correspondencies of bodies in unstable equilibrium. Thus, physically, rocking up and down is a giving up of poise, and regaining it only to give it up again. What could better type despair than this loss of bodily control?

In rocking from side to side all the large muscles assist to balance the body.

In the side to side movement of joyousness there is the element of control and an example of rhythm; the body we know is in no danger of falling. It is dancing with rhythm. How admirably it types the free joyousness of the child's nature!

The "twisting movement" adds abruptness to slight instability, and shows that the disturbance of equilibrium is slight. This gesture visibly types irritability. And the vanishing stress of the voice in complaint gives an audible symbol of instability.

We give a series of six attitudes of the torso, showing the relation of subject and object: —

(1.) *Leaning directly towards the object of desire indicates*: Vital attraction.

(2.) *Leaning obliquely towards the object of*

desire indicates : Attraction based on a recognition of the higher Mental and Emotive qualities.

(3.) *Leaning directly from the object indicates* : Vital aversion or repulsion.

(4.) *Leaning obliquely from the object indicates* : Emotive aversion or repulsion.

(5.) *Bowing directly before the object indicates* : Superstitious reverence and worship.

(6.) *Bowing obliquely before the object indicates* : Rational reverence and worship.

CHAPTER IX.

THE HEAD AND ITS EXPRESSIONS.

THE naturalist Oken, walking one day in a forest, came suddenly upon the bleached skull of a deer.

Holding the skull in his hand, he was examining, in a meditative mood, its anatomical features, when there flashed into his mind an identity of structure that had never before struck him.

"This skull," he said, "is the four upper vertebræ of the back-bone, arrested, distorted, fashioned into plates, and put into spherical form, differentiated for a purpose."¹

Now, what seemed fanciful in Oken and Goethe agrees with modern research; that of Owen, and later of Broca, the most eminent of French anthropologists.

The eight bones that form the human skull, and the fourteen bones that make the structure of the face, are the four upper vertebræ of the spinal column, differentiated from the structural

¹ It is a little curious that Goethe discovered this identity at about the same time. Eras of discovery are atmospheric. When all the occult conditions are fulfilled the discovery is made.

type common to all land mammals, to serve most important ends in man's slow advance from sav-
age to civilized conditions.

Indeed, to fit man, — not alone to rule all other forms of life upon the earth, — but to make any advance possible, the nerve substance must be concentrated, localized, expanded, and protected.

The intent of Nature was made apparent in structure, when the four upper vertebræ were differentiated into four enlargements or segments to localize, hold, and protect the brain substance.

These segments of bone, thus expanded as arcs and united to form the skull, are known as the occipital, parietal, frontal, and nasal segments.

The fourteen bones of the face form cavities in which rest the sense organs, or they project rough points for the attachment of muscles.

(a.) In this spheroidal form of the skull there is to the philosophic mind abundant promise and prophecy arising from analogy and correspondence.

A wider vision than ours would be able to plainly see the unity of the material and spiritual.

So we may without violence imagine a being from another sphere, — an older world than ours, — with higher rational and intuitive powers, examining a human skull.

He would say: "This being who bore upon an upright column this globe form was easily enough the ruler of the earth, and bridged the chasm between the animal and the rational soul."

Let us examine the human structure and mark its points of superiority: —

All vertebrates, from lowest to highest, through the whole chain of fish, reptile, bird, and beast, are built upon the same general plan. The structural type is permanent.

This is the general plan of a vertebrate structure:—

(1.) A column of jointed segments or bones.

(2.) A line or thread of nerve substance enclosed within this column.

(3.) Certain arcs thrown out from the central axis of the column to hold the life organs.

(4.) Certain lines, levers or shafts, four in number, disposed in pairs, and projected from the axis of the column to form organs of locomotion or prehension.

(5.) And finally, a nervous system, separated from the body cavity, with its centre located in the head.

This is Nature's general plan of vertebrate structure. It is in points of differentiation from the structural type that we find the key to man's supremacy.

Let us state the points of structural differentiation:—

(1.) Man stands vertically poised upon two shafts. He thus escapes the undue thralldom imposed by gravity upon the other land mammals who are tied to earth by four shafts.

This is the key to his superiority and the visible sign of his liberation.

Two limbs are now free, and the face is vertical to the line of the horizon.

The sense organs are grouped in close connection with the great central organ of consciousness — the brain.

(2.) Man has, in proportion to size and weight, three or four times more brain, three or four times more thinking matter, than any other of the large land mammals.

(3.) This thinking matter is convoluted. Like leaves or plates, the white and gray matter lies in the brain-case in folds or furrows, the gray cortex covering the white and dipping down into the folds.

A brain of few folds is dull and unintelligent. There seems to be an unexplained correspondence between the number, form, and disposition of the convolutions and the amount of intelligence.

(b.) Modern research abundantly fortifies these conclusions. Said Broca: "Simple convolutions, developed uninterruptedly, and alike in both hemispheres, are characteristic, in both man and other mammals, of inferiority."

And John Fiske: "The amount of intelligence is correlated with the number, depth, and irregularity of the furrows. In the brain of a great scholar the furrows are very deep and crooked, and hundreds of creases appear which are not found at all in the brain of ordinary men."

(4.) And finally, to mark man's preëminence among his congeners, there is in his brain a localized seat for the faculty of language.

This faculty, according to Broca, has its residence in a very small division of the cerebral hemispheres, particularly of the left hemisphere.

Its location is upon the superior portion of the fissure of Sylvius, and it occupies the posterior half or third of the third frontal convolution.

If this part of the brain is seriously injured, the man can understand but cannot articulate.

(c.) It would seem evident that the being having these advantages of structure would outstrip the other mammalia through the evolution of the knowing faculties.

He alone of all the beings upon earth would seek to comprehend the relations of things about him. He alone would question the why, whence, or where of his existence or destiny, or form any conception of the vastness of such subsistences as Time, Space, Force, Spirit, God.

The anthropoids nearest him in structure have never known even how to use a staff, or build a fence, or plant a kernel of corn, or kindle a fire, or make a dwelling that can be dignified by any higher name than "a nest" — the name given by Livingstone to the tree shelters of the Soko of Central Africa.

All the evidences of structure, function, and adaptability show that man's future advance lies along the lines of Mental and Spiritual progress; the emphasized Vital has already dropped out of the American and English Saxon. The type of our ancestry has greatly changed. Ten or twelve centuries ago, rooted near the earth in the Vital, our ancestors fought like tigers, tooth and nail, — got their name "Saxon" from the sword with which at a short arm's length they hacked and hewed their foes. They boasted that their ancestors drank blood out of human skulls. They were frightful gluttons and drunkards.

So the type of men who followed Wallace and Bruce, or fought with main strength at Marston Moor, would be of little service in modern warfare, where the profound strategy of military science is complemented by the terrible enginery of ironclads on the sea and Gatling guns on land.

At the commencement of the struggle for life man is the

most helpless and defenceless of animals. "Naked and without weapons" is Linnæus' description of him.

As the babe of the nineteenth century lies in the cradle, it holds in its little hands the ancestral threads of the race. And it is soon made evident that the differentiation is toward physical weakness, and toward mental and moral strength.

The savage Vital has almost died out of modern man. The keen edge of the senses that serve the animal nature is blunted. His limbs have lost their greatest activity. The horse and deer easily outrun him. The dog develops a keener scent. The eagle's vision is further reaching.

Ah! with feeble limbs to pursue, feeble hands to seize, feeble teeth to tear, it is evident that the Vital nature must be complemented by other appliances. So he fits new lenses to the eye, and counts a million of stars in the golden belt of the Milky Way where the Greek saw only the glittering pathway of the gods. He hears with the new ear of Bell or Dolbear. He binds the wings of Mercury to the locomotive, and adds to his speed. And, finally, he annihilates space, and beats Old Chronos himself by sending a message from London at noon to be read in Boston or New York while it is yet morning.

We may study the head and its expressions from two points of view : —

(1.) *Through that which is fixed and permanent, and which presents outline and form.*

(2.) *Through the play of the muscles under nervous stimulus.*

The fixed and permanent expressions of the head are the result of structure.

So cranioscopy is an open comment upon race, heredity, and habit.

And no object presents more subtle and pertinent correspondences than those prefigured by

this aggregation of lime crystals fashioned into spherical form.

(d.) What a text for the moralist is this hideous collocation of bones — an unclothed skull!

The marvelous organs of sense, the complex network of muscles, veins, nerves, tissues, and skin have fallen off, and long ago resolved themselves into dust. The color, the moving lights and shadows have vanished. Fortunate if this hollow void and emptiness can revive memories of the illuminated face, pulsing with life and aglow with passion!

“*First Clo.* This same skull, sir, was Yorick’s skull, the King’s jester.

“*Ham.* This?

“*First Clo.* E’en that.

“*Ham.* Let me see. Alas, poor Yorick! I knew him, Horatio: a fellow of infinite jest, of most excellent fancy: he hath borne me on his back a thousand times; and now, how abhorred my imagination is! my gorge rises at it. Here hung those lips that I have kiss’d I know not how oft. Where be your gibes now? your gambols? your songs? your flashes of merriment, that were wont to set the table on a roar? Not one now, to mock your own grinning? quite chap-fallen? Now get you to my lady’s chamber, and tell her, let her paint an inch thick, to this favour she must come; make her laugh at that.”

In considering the fixed and permanent expressions of the head, we may say that there is a pretty general agreement among those who have given much thought to the subject, that certain points of structure are indications of the predominance of one or another of the three states of the Being.

Without any attempt to exhaust the subject, let us generalize a few principles based upon structure: —

(1.) *Among all mammals, the advance of the lines of the head toward the vertical is the measure of psychic advance.*

The student can test this law by sketching human heads, where the forehead, nose, and chin, each in turn, are made to depart from the vertical.

He will find all forms of animal expression to rest in the proportions thus sketched. An examination of classic heads in an art museum, or of engravings of Greek sculpture, will verify our proposition.

(e.) Camper's facial angle has long ruled in the world of art as a measure of the amount of intelligence shown through the structure of the skull. His method of determining the angle was to trace a skull, draw a horizontal line, which should pass through the ball of the ear and the sockets of the front teeth. Upon this horizontal line raise a vertical line, touching the teeth and the most prominent point of the frontal bone.

This idea, it is said, was suggested to Camper while examining some antique gems.

He observed that there was a great gain in intellectual expression when the line that touched the forehead and teeth was nearly vertical. This he conceived to be the key to the antique head. As the line fell from the vertical, the head and face lost majesty and dignity of expression. An angle of 70° gave the head of a negro; of 60° , an orang-outang; and so on downwards.

A broader generalization will be accepted by the student of evolution.

(2.) *Brain development in man has been constantly progressive, while with the other mammalia it has remained comparatively stationary.*

All the mammals have the cerebellum and spi-

nal cord well developed. This disposition of nerve substance serves a predominant Vital nature. In man there has been a steady growth of the cerebrum or fore-brain. And it is this fact of the evolution of upper and fore-brain that marks his supremacy. Both common and scientific observation agree that we look for intellectual expression in the approach to the vertical of the forehead.

But we believe Alexander Walker, the Scotch physiognomist, to have been the first to formulate the law that, through form, indicates the intensity and permanency of intellectual force.

(3.) *Walker's Law: On the length of the cerebral organs depends their intensity.*

On their breadth depends their permanency.

(f.) We believe this law to be central in fixed expressions of Form. The student in his study of heads will find abundant proofs of its validity. Thus, the heads of nearly all the noted poets, artists, actors, orators — the *emotive* men; men of quick sensibilities; the men of sentiment — conform to this law. If the head be measured with tape and line, its form will verify this observation; — that is, the cerebral region will show more height than breadth.

The heads of Shakespeare, Sir Walter Scott, Lord Byron, and Burns present notable examples of the rule of this principle.

So, too, the heads of great lawyers, shrewd statesmen, generals, architects, builders of railways — men of judgment; men of practical sense, “of hard common sense” — will measure more in breadth than in height.

The heads of Stephenson and Watt among great architects; of Cromwell, Napoleon, and Grant among generals; of Girard, Vanderbilt, and Gould among organizers of great business operations illustrate this law.

Another statement of Law will include both forms of Expression, — the permanent as Form, and the transient as Motion.

Law : The hereditary, habitual, and unconscious activities of the Being disclose themselves through fixed and permanent forms.

The transient, immediate, and conscious activities through motion.

This Law holds good in the expressions of the body as a whole, or of any of its agents.

(g.) Take as an illustration one who has made money-getting the supreme end of his existence. Now, at the age of sixty, this habitual and ceaseless psychic activity has made fixed and rigid the muscles of the face; and the lines and forms presented declare him a miser.

And all the years of his ignoble pursuit he was chiseling, day by day, a statue of flesh of repulsive aspect, adding to the expressive lines of head and face by every miserly thought and act.

We may now state, broadly, the expressions of the head, presented by the cranium (the fixed and permanent skull) through outline and form.

II. *The expression of form and outline of the forehead is Mental.*

III. *Of the arch of the crown of the head, as far as the roots of the hair, is Emotive.*

I. *Of the back of the head is Vital.*

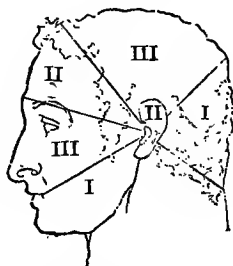
We think this analysis of the expressions of the fixed and permanent form of the cranium will be found to agree with the scientific deductions of modern anthropology.

It is essentially the analysis of Lavater, and it

agrees with the broad deductions of phrenology made by Gall and Spurzheim. Whatever differences of opinion may exist in regard to the empirical conclusions of craniology, which maps out certain tracts of the skull as the domain of certain mental faculties, we believe scientific thought to agree in the main with our conclusions.

(h.) Delsarte is credited by Delaumosne¹ with the division of the head, including the face, into five zones.

We present a diagram of his scheme of the cranium and face.



Each zone speaks its language through external form. In this scheme I represents Vital, II Mental, III Emotive. The exact statement of Delaumosne is: "The Life is in the occiput, the Soul in the parietal, the Mind in the frontal."

These divisions of the head and face, accredited to Delsarte, are manifestly taken from Lavater. We think that they will bear the test of critical observers of human expression, as well as of scientific deduction.

Let us now consider the gestures of the head as an agent of expression.

Let us recall three propositions: —

1. *Each zone of the head speaks its language of expression through Form.*

¹ See *Delsarte System*, p. 169, Edgar S. Werner, New York.

2. *Each zone speaks an expressive language through Motion.*

3. *Both Form and Motion may be expressive, as Eccentric, Poise, and Concentric.*

When Form is presented, we infer ; when Motion, we know. Thus, given a retreating forehead, large cheek bones, and heavy jaws, and we infer the amount, kind, and quality of intelligence.

Motion, on the other hand, immediately translates the ruling mood. Thus, when we see the fist clenched, the brow corrugated, and the jaws firmly set we know the man to be angry.

We may study the gestures of the head from two points of view : —

1. As an agent of expression through its unassisted movements.

2. As a centre of arrival and departure for the gestures of the hand and arm.

(h.) In our discussion of the gestures of the hand and arm, it will appear that our strictly Mental gestures tend to arrive at, or depart from, the great Mental centre, the head, and to coördinate the elements of Time and Space with the motion of the gesture.

The head has three primary modes of motion to translate the three primary states of the Being.

The modes of Motion and the states of Being which correspond in gestures are : —

I. *Eccentric Motion : which corresponds with the Vital nature, and translates its activities.*

II. *Concentric Motion*: which corresponds with the *Mental* nature, and translates its activities.

III. *Poise of Motion*: which corresponds with the higher *Emotive* nature, and translates its activities.

We give the three primary attitudes of the head, and the three states of the Being expressed by these attitudes: —

I. *The Eccentric Attitude elevates the head, carries it high, and a little backwards.*

This attitude discloses the Vital state.

(i.) It will be noted that men of fine physique and high health carry the head high. Also, that undersized men — little men, who are ambitious — thus strive to initiate a visible correspondence of Outer and Inner.

Soldiers, hunters, and frontiersmen illustrate this attitude. In such men Life, pure and simple, is strong. The Vital stream is at its flood.

II. *The Concentric Attitude lowers or bows the head.*

This attitude discloses the Mental or Reflective state.

(j.) Not alone the head but all the agents illustrate reflection, meditation, absorbed thought through this mode of motion.

The student may test this by earnestly assuming the mood of deep reflection. The body will play its part in exact correspondence with the intensity of the mood.

III. *The Poised Attitude holds the head, easily erect, in balance or equilibrium.*

This attitude discloses the higher Emotive Being.

(k.) The student will note that this state of the Being finds its correspondence in the balance or equilibrium of the body.

All elevated moods of the Soul tend to equilibrium. The body is poised with conscious strength in the highest moments of the Soul.

We present a series of nine inflections of the head : —

1. A forward movement of the body, ending in throwing the head backwards, indicates interrogation, surprise. With the chin forward, admiration, expectation. With the torso forward, sympathy.

2. The same movement with the chin lowered indicates doubt, resignation, humility. With the chin falling towards the chest, confusion, shame, self-condemnation.

3. A forward, vertical nod of the head is the sign of affirmation.

The side to side horizontal movement, the sign of negation.

4. A sudden, oblique, forward movement of the head indicates the menace of an angry man. A slow, slightly oblique, forward movement, starting from poise, is the menace of a resolute man.

But if the gesture be a sudden oblique movement backwards, it is the threat of a weak man.

5. An inquiry made with slight oblique movement of the head, while slowly folding the arms, is a menace.

6. The head lifted slowly, along the vertical

line, and thrown slightly backward, indicates exaltation. Thrown back with lateral to-and-fro movement, self-esteem, boastfulness, self-sufficiency. Tossed obliquely backward, dissent, depreciation.

7. Head thrown obliquely backwards, chin raised, upper-lip raised — sometimes uncovering the canine tooth, on the left side — indicates hatred, disdain, contempt.

8. Head erect, then thrown backward with violence, indicates horror. Thrown back with slow movement, with eyes turned upwards, veneration, reverence. In melancholy the head inclines downward towards the left side. In malevolence the head moves horizontally to and fro, the eyes partly closed following the line of the horizon.

9. Head giving quick rotative movements, with sudden oblique gestures, indicates impatience, annoyance about little things.

The head and torso move at the same time when the Mental and Emotive natures desire to make one expression, and for the same purpose. If now we suppose the Vital to invade the Mental and Emotive zones, three gestures seem to act in unison, and this with all races of men more often than any others, and thus disclose the complex psychic state. The Vital shows the highest activity through these forms. (1.) The clenched fist. (2.) The closed teeth. (3.) The corrugated brow.

The hand and arm may emphasize all gestures of the head and torso.

So, a purely Mental comment would be given with a gesture of the head, the hand adding its emphasis, the torso making no movement. But an Emotive or passional comment would be initiated from the torso, the hand assisting, and the gesture from the head coming last.

So, broadly speaking, the science of semiotics¹ founded upon the analysis of Delsarte seems to be well founded, that the gestures of the head are Mental, those of the torso Emotive, those of the limbs Vital.

(*m.*) The student should bear in mind that in expressions of passion, under the impulse of Nature, no agent is uninterested in the drama that is being enacted. Each has its *rôle*. Each is master of its own effects. Each knows, too, how to subordinate its egotism. To the principals the chief *rôle*, to the subordinates inferior *rôles*. All must aid to make the play a sustained, proportioned, and coördinated whole.

Art forms its mimic display out of the ample and everywhere present material of natural display, and so it happens that Art, the most art-full, always affects us as Nature, the most nature-full.

¹ Semiotics is the science of signs. The term is an excellent one in the technique of expression. It signifies the appropriation of the sign to the idea. Give the sign and you suggest the mood. This fitting the gesture to the idea is Delsarte's discovery. Every mood has its natural sign. To know the sign, to direct the agents to give the sign, to coördinate nature and art through the sign is to master the science and art of semiotics.

CHAPTER X.

THE HAND AND ARM IN GESTURE.

ONE day—more years now than the author cares to be accurate about—his revered teacher, William Russell (who that came under the influence of this great teacher can ever forget the charm of his manner!) opened, before his class of enthusiastic students, a rare old volume disclosing a full-page picture of an orator, standing, to all appearance, inside a globe and pointing with extended arm toward some letters (r. oblq. u.) right, oblique, upwards, inscribed upon the inner periphery of the projected sphere. The teacher said to the class: “This is Austin’s Chironomia, and here you will find the best treatment extant of the subject of gesture.”

We attached little meaning to the picture then, and have since had a suspicion that neither the eminent teacher nor the author of the rare volume found any deeper significance in that pictured globe, inside which stood the orator, as in a cage, than a convenient way of enforcing the technique of the hand and arm in gesture.

Some years later we were reading, in an idle mood, Victor Hugo’s “Toilers of the Sea,” when

a significant sentence of the great French writer flashed a correspondence into our mind that had never occurred to us. The sentence read : —

Man stands on one globe and bears another on his shoulders.

“Are all gestures,” we asked ourself, “rooted in correspondences between this material appearance, our objective world, and our subjective relations to these outer appearances ? ”

We ask the student to ponder thoughtfully our query. And as a stimulus to his thought, let him reflect upon a few propositions.

1. There are three planes of vision. The plane of Equality, of the Superior, and of the Inferior.

Two of these planes form divisions or zones of the visible hemisphere that is arched above us.

Man alone surveys the three zones of the sphere. Animals, bound by instinct and with no conscious centre, see only what is. They survey only the zone of Equality. Led by their sensations they live in the kingdom of here and now.

2. If an idea leads you, the eye moves upwards in space in pursuit. When you gain the idea the eye moves downwards.

3. All the phenomena of the imagination are in the spaces of the imagination.

4. In expression the line of the horizon is the boundary of the positive and negative zones. The zone of the positive extends from this line

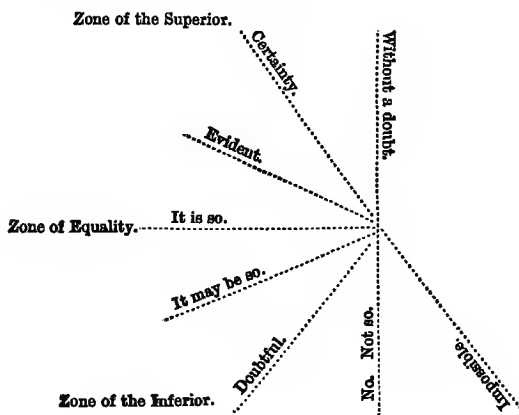
through 90° to the zenith. The zone of the negative through 90° to the nadir.

5. The hemisphere from zenith to nadir which we face is positive in significance. The hemisphere at our back is negative in significance.

6. *It is upon the revelations and implications of the sphere that the different angles made by the hand and arm come to have absolute significance in gesture.*

So ascending angles must in the nature of things express degrees of certainty and affirmation. Descending angles must express degrees of doubt and negation.

(a.) The diagram will illustrate : —



Let us reason upon the significance of this fact that our gestures seem to bear a relation to the figure of the sphere.

The globe upon which we stand, and its envi-

ronment, is the world our senses have built for us.

It is the physical and sensible apparition of the mental philosopher. A world of matter made known to us through impressions, received by special organs of sense, which impressions are co-ordinated by the central mass of organic nerve substance, the brain.

Now the testimony, continual and persistent, of these sense organs, led by the eye, is that we stand at the centre of a limited and fixed plane, with a dome of sky above, and shutting down upon us like a huge inverted bowl.

In vain we argue that these are sense relations which modern science has dissipated. They remain realities to the savage and to the civilized child.

Reason as we may, our every-day talk and gesture betray us. We are in vernacular and at root disciples of Ptolemy. Every day the sun rises and sets, and the willing testimony of our sense of sight is that the moon is larger than the day star.

There is a constant tendency in us, which poetry and art foster, to revert to that early morn of the race when appearances were realities and the testimony of the senses final; when the earth was the centre, the sun and moon the greater and lesser lights; when the heavens were the "up-heaved," and Hades the "cast down."

Thus are we *inexorably* chained to the relations of our environment.

(b.) The crude conceptions of the most advanced writers of the middle ages hardly parallel the concepts of the present races of savages and of our children. For two hundred years, including the sixth and seventh centuries of the Christian era, the ecclesiastic writers taught that the earth was a square plain, at whose outer edges rose mountain walls, supporting the dome of heaven.

This dome was a solid crystal roof, wherein the fixed stars were set, and over which the sun and moon were pulled to and fro in grooves by the angels.

Above this firmament, which separated the waters above from the waters below, was the celestial cistern, through whose windows the rain fell.

Above this was heaven, constructed with seven stories. In the highest story dwelt Jehovah himself, seated on a dazzling throne, surrounded by angels and saints.

Thus were the calm and majestic appearances of the o'erhanging sky, which everywhere fills the natural man with awe and wonder, tortured from their sedate and reverent meaning to light the obscurity of a Hebrew text.

Thus it is a necessity that each man stands upon the globe, and at the centre of the Universe, and projects radial lines into the spaces above and around him, and refers to all objects as here or there, near or remote, from where he stands.

But the globe he bears upon his shoulders, what of that?

It is a world inexorably bound to matter, and yet the farthest possible remove from it. A world of concepts, — images of the actual, pictures of the real, — projected in some way that baffles science to explain, form the convoluted cortex of the brain, every picture being some kar-

leidoscope re-presentation of the forms, forces, changes, and interactions of an environment of matter.

And this is the world that man bears upon his shoulders.

Let us summarize our conclusions arrived at in two propositions : —

Prop. I. For each human being there always and ever exists a visible, material, or objective sphere. He is at its centre, and refers to all objects as filling its spaces, or as outlined against its periphery.

Prop. II. Through the operation of psychic law, and by a subtle process which we may never fathom, the great knot of nerve matter that fills the skull projects just such another sphere ; its subjective image, picture, and correspondence, with like periphery, spaces, and objects.

Now, bearing in mind the interdependences and correspondences of these two worlds, which are realities in every one's consciousness, let us formulate three propositions bearing upon human expression : —

Prop. I. Man as a sentient being is both Impressive and Expressive.

II. He must have the inward impression before he can give the outward expression.

III. Impressions always tend to manifest themselves through some outward form, and, when strong enough, always do so manifest themselves.

And, as a corollary from the above propositions, we add : —

Those races, or individuals, have most expressive power in whom sensations are most frequent and active.

(c.) This tendency of the Being to reproduce through form and motion what has been received through the sense organs is central in expression.

We may say that the Psychic in man seeks expression. As we have shown, its three forms are voice, gesture, and articulate speech. Through these forms it seeks to make itself objective.

But in the last analysis all is gesture. Voice is the gesture of the larynx. Articulation, gesture of the mouth organs. The face, a moving mirror of gesture.

We may divide all gestures into two classes : —

1. *Gestures which make reference to objects.*
2. *Gestures which express the states or conditions of the Being.*

In the first class we shall include the two kinds of objects presented to consciousness : 1. Objects of matter. 2. Objects of the mind. Or, objects in real, and objects in ideal. The thing itself ; its picture.

Let us consider the first class of gestures, and the special instrument by which these gestures are made.

There are two faces with which we look outward upon the material world and inward upon the immaterial world.

These faces are our faces and our hands, — the human face with its mental centre, the eye ;

the human hand with its revealing centre, the palm.

These two faces are the most active of all the agents of expression.

(*d.*) The face leads in expression, and the eye leads the face. The face more completely manifests the ruling conditions of the Being.

The hand manifests more completely man's comment upon existing objects. It is an assistant to the expressions the face has already given.

It does what the face cannot do : it can handle the object, sketch it, and project it in form into space.

There is a wonderful comity existing between the three great agents, — the Face, Hand, and Voice.

What the face cannot put into gesture is given to the hand. What the hand cannot express is given to the voice.

These three agents, let it be noted, culminate their forms of expression in the great songs of Liberty. Said Klopstock : "The Marseillaise has cost Germany the lives of fifty thousand of the best of her children."

The hand and arm, then, is the bodily agent by which man makes real and present the objects filling the spaces of two worlds.

Let us consider its fitness through structure, function, and utility for its highest use, — that of Expression.

Comparative anatomy has conclusively demonstrated that the human hand and arm is the differentiated fore-limb of a vertebrate animal.

The great naturalists, Owen, Agassiz, Huxley, Broca, have demonstrated that essentially the same structure of the fore-limbs is found in all vertebrates.

That the same bones which form the hand and arm of man find their analogues in the fin of the fish, the paddle of the turtle, the wing of the bird, the hoof of the horse, the paw of the bear, and the almost human extremity of the anthropoid ape.

In a word, these are, one and all, prophecies of the human hand and arm.

The perfect differentiation of the fore-limbs into hand and arm came with the acquisition of articulate speech, and both kept pace with the differentiation of the brain.

(*e.*) Emancipation must have been Nature's purpose long before it became realization.

And when at last man could assume the vertical and lift his face above the line of the horizon, and could sweep with his eyes all the spaces of the visible hemisphere, — when he began to utter consonant sounds in addition to inarticulate cries, — the fore-limbs of an essentially anthropoid structure kept pace with his emancipation, and released themselves from taking any part in the lower office of the Vital nature, locomotion, and slowly differentiated a human hand with five sensitive lengths.

This differentiation of structure to fit a corresponding differentiation of brain substance, and also of the trachea and mouth to fit them for articulate speech, has kept wide open the chasm between man and beast — a chasm which it would seem impossible ever to bridge.

Huxley admits that he finds no germ of an art faculty in brutes. Darwin says that he discovers no sense of humor in the beasts.

But the Abbé Bourgois finds that the man of the quaternary period, perhaps even earlier than that dim era, sketched the hair-clad cave bear and elephant upon ivory with flint points.

And modern science confirms the saying of Democritus that all the senses grew out from the finger-lengths, and were modifications of touch.

Wonderful prophecy of art attainment written in structure : —

The human arm is a thigh turned round!

Technically, in gesture, the arm consists of three lengths : arm, fore-arm, and hand. It is a flexible lever, or rather a combination of levers, each with its own centre of motion, and each capable of moving from another centre than its own.

This arrangement of three radii and three centres makes all forms of motion possible.

(f.) Professor Benjamin Peirce of Harvard University has proved, by rigid mathematical process, that if a lever be made to revolve on a centre, and its free extremity be made the centre of motion of another lever while the first is revolving, and if a third lever be attached to the second in the same way ; not only the cycles and epicycles, by which the old astronomers indicated the wanderings of the planets, but all curves may be traced.

And if there is added a fourth, fifth, and sixth lever, the tracing of all forms becomes possible.

Now, this is identically the system of levers and centres found in the human arm and hand.

The fingers add the fourth, fifth, and sixth levers.

To man, assuming the vertical, with eyes surveying the

three zones of Equality, Superior, and Inferior, with the two fore-limbs differentiated, so that they may project radial lines in all directions toward the periphery of the sphere, what measure of progress is not possible?

Let us indicate these three centres of motion: —

(1.) The centre at the shoulder. Here is the centre of motion for the whole instrument.

The joint helping to form the shoulder is a ball and socket joint. This arrangement gives freedom and sweep of movement from this centre.

(2.) The centre at the elbow. Here is the centre of motion for the fore-arm and hand. Here we have the two bones of the fore-arm so jointed with the bone of the arm as to allow both a free, revolving motion and an outward and inward motion.

This arrangement gives the important movements of the hand known as pronation and supination.

(3.) Centre at the wrist. Here we find the centre of motion for the hand. Here eight small bones are arranged in two rows, and are so jointed as to allow two movements, a hinge movement and a movement from side to side. The centre of the revolving movement of the hand is at the elbow.

Thus this instrument of levers and centres combines all the necessary elements for strength, ease, and gracefulness of motion.

In directing a gesture outwards the arm initiates the movement. Then the fore-arm turns on its centre, the elbow; and last the hand, moving from its centre, the wrist, concentrates all this accumulated motion into executive and significant gesture. And so the hand climaxes expression.

(g.) The student will note that in man the evolution of hand and arm is complete.

The bones increase in length and the muscles in size from the fingers upwards. The shoulder projects beyond the side of the body, the muscles of the chest and back aid the motion.

There is the greatest freedom at the shoulder, the greatest firmness at the elbow, the greatest strength at the wrist. The whole instrument is at once a pliant chain and a bar of steel.

What shall prevent the being with such formidable emanicipations from rulership upon the earth? We may well claim for him the significant term of modern anthropology, and call him **ARCHONT, THE RULER.**

In considering the lines of gesture, traced by the hand and arm, we shall find the instrument to be limited by two conditions: —

(1.) The condition imposed by its structure as a part of the organism.

(2.) The condition of the restriction imposed through our ideas of Space, Time, and Motion.

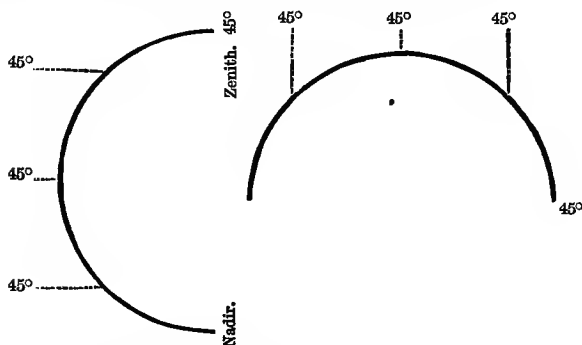
The instrument restricted by structure has its vertical and horizontal limits.

Let us trace these limitations: —

The vertical sweep of the arm is from zenith to nadir through 180° of a circle.

The horizontal sweep of the arm is through 180° of a circle parallel with the line of the horizon.

The diagram will illustrate the sweep of the instrument through 180° of the circle.



(h.) We beg the student to pause here and consider the significance of these lines projected by the vertical and horizontal sweep of the hand and arm.

Let him note: 1. *They are veritable arcs of a circle.* 2. *Their projection in all directions by the sweep of the instrument constructs the figure of the globe.* 3. Recall Hugo's lines: "*Man stands on one globe and bears another on his shoulders.*"

Now you are prepared to assist at a new creation. Stand erect, point to the zenith with the fore-finger of the right arm. Now give an easy sweep through 180° to the nadir. You have traced an arc of longitude as upon a globe. Now sweep the left arm in the same way as you have the right. You have now traced two arcs and formed the grand circle of your globe with its 360° . Now carry the right arm across the chest and sweep through 180° . Face exactly in the opposite direction and sweep through 180° . You have traced a second great circle—the equator of your globe.

Now trace the lines of latitude and longitude, and you

face a hemisphere. It is the hemisphere of the Positive Zone.

We will suppose these lines of latitude and longitude to have been traced with electric light, so that your hemisphere remains visible. Turn right about, face directly opposite, produce your arcs, both vertical and horizontal. You find yourself inside a globe. Now, perhaps, you recall the fact that many great philosophic minds — notably Aristotle and Plato, Oken and Swedenborg, Goethe and Böhme — have made the globe the symbol of wholeness and entirety.

Let us play, for the nonce, the magician! Expand near lines into remote, near spaces into distant reaches, and you find yourself at the centre. The visible hemisphere is above and around you; you even possess the stars of your new creation! All objects are filling spaces or are outlined against the distant periphery.

Is there no prophecy lurking anywhere within the newly created world you have thus swung out into space?

The second limitation of the hand and arm is the condition imposed by our ideas of Space, Time, and Motion.

The whole class of ideal gestures are rooted in the correspondences of these three great restrictions.

We have shown that Delsarte's Nine Laws of Gesture can be justified only by reference to this law. We shall discuss the subject at greater length in a future chapter upon "The Realm of Correspondence in Gesture."

We may draw the following conclusions from our discussion of the relations existing between the two worlds: —

1. *That all objects, both of matter and of mind, fill the spaces or are outlined upon the inner periphery of a projected sphere.*

2. *That all gestures referring to these objects will be identical; for the lines and spaces of the one will be the lines and spaces of the other.*

3. *That each line of gesture will have reference to a radial line projected from a centre where stands the speaker.*

4. *Each gesture, referring to objects, will have the three technical elements of Direction, Place, and Extension.*

(i.) It is not the author's intention to give, in this treatise, the technique of gesture.

He would refer the student to Austin's *Chironomia* for an exhaustive treatment of technical gesture. All recent manuals of gesture are founded upon this admirable treatise.

A definition and illustration of the three technical terms that indicate the relations of objects to the speaker and his audience will come within the scope of a philosophic treatment of the subject.

1. Direction refers to some point upon a line traced by the vertical sweep of the hand and arm through 180° of a circle.

We name five points of Direction: 1. Horizontal. 2. Ascending. 3. Zenith. 4. Descending. 5. Nadir (see p. 157 for illustrative diagrams).

2. Place refers to some point upon the line traced by the horizontal sweep of the hand and arm through 180° .

We name five points of Place: 1. Front. 2. Oblique. 3. Lateral. 4. Oblique backwards. 5. Backwards.

Technically, then, points of Direction are points upwards or downwards. Points upon lines of longitude. And points of Place are points in front, at side, or backwards. Points upon lines of latitude.

3. And the term Extension refers to the outlining, de-

scribing, or emphasizing movement of the hand, by which the speaker indicates the form, action, or some other property of the object.

It will be readily seen that this technique establishes relations of Time, Space, and Motion between the speaker, his audience, and the objects filling the spaces, or outlined against the periphery of a projected sphere, from whose relations and implications there is no escape.

When the orator standing before his audience has given the object or concept Direction at some point upon a vertical, and Place at some point upon a horizontal line, he frequently adds an outlining or describing gesture of the hand. And this gesture is usually the climax or most expressive moment in the Time of the action.

Let the student apply this technique of Direction, Place, and Extension to the following selection according to our scheme : —

1. *Project the subjective sphere.* 2. *Locate objects in its spaces, corresponding with like spaces in the objective sphere. Note carefully the five points of Direction and Place and the climax of the outlining or expressive action which we have called Extension.*

Scaling yonder peak,
I saw an eagle, wheeling near its brow
Over the abyss; his broad expanded wings
Lay calm and motionless upon the air,
As if he floated there, without their aid,
By the sole act of his unlorded will
That buoyed him proudly up.

The student should mark that in all our objective gestures of the hand the palm rules. It is the face of the hand. The palm leads the wrist.

Whatever gesture traces an object, the palm, at the most expressive moment, faces or looks at the object.

This is a courteous law in the etiquette of gesture. Would you turn your back upon so august a personage as a cloud-capped mountain?

In technique, the fingers group themselves in accordance with the analyses of the Greek sculptors and orators, forever models of strength and gracefulness.

The two middle fingers are held together and are slightly bent inwards. The index and the little finger are separated slightly from the two middle fingers, the index nearly straight, the little finger slightly curved. The thumb is held backwards nearly on a line with the index finger.

(j.) A single caution should be whispered in the ear of the earnest student of technical gesture.

We put our suggestion into two apothegms : —

1. *Conscious technique kills expression. It is the unconscious that gives life.*

2. *A gesture put on is a grimace. It has no art expression.*

CHAPTER XI.

THE GESTURES OF THE HAND AND ARM AS MANIFESTING THE STATES OF THE BEING.

IN our last chapter we included all gestures through which man manifests himself in two classes :—

1. Those which refer to objects, whether of matter or of mind.

2. Those which more directly and intimately translate or express the states of the Being.

Before we proceed to discuss the gestures of the second class, let us review in a few propositions our conclusions of the last chapter :—

1. By “the nature of things” man is a being limited by three great restrictions, Space, Time, and Motion.

These restrictions are unavoidable, always operative, unchangeably the same.

They are the expression and summary of the inevitable.

2. Man, as we find him on this earth, is so conditioned, so *bound by what seems to be*, that he, as a necessity of this seeming, projects the spheres of two worlds and is inexorably bound to their centres.

These two worlds are : The sense world, the world of matter.

The picture or ideal world, the world of mind.

3. We know of the reality of the world of matter through the conclusive evidence of our senses.

And we know of the reality of the world of mind through the conclusive testimony of our selves — our souls.

Of these two worlds the world of mind is the most real, constant, and abiding.

(a.) Reflection will convince the thoughtful mind that it is only the young to whom the world of matter is most real. "Old age is our first lesson in living above the air," said Garth Wilkinson.

Huxley quotes Descartes in justification of this idea. He says : "The most elementary study of sensation justifies Descartes' position that we know more of mind than we do of body — that the immaterial world is a firmer reality than the material. So long as a sensation persists, it is a part of what we call our thinking selves, and its existence lies beyond the possibility of a doubt. Our sensations and their relations make up the sum total of the elements of positive, unquestionable knowledge."

4. The lines of gesture, whether referring to the objects of matter or of mind, are identical. These lines have reference to the spaces and lines of a projected sphere.

With this brief review, we proceed to the consideration of the hand and arm as an agent through which the Being manifests its three states or conditions.

At a recent banquet in New York, complimentary to Salvini, Dr. Oliver Wendell Holmes thus recorded the impression made upon him by the great actor: "You might almost say his body thought!"

A paraphrase of the genial poet's fit eulogy—removing the element of implied doubt—gives us the central thought of our Synthetic Philosophy of Expression.

"You may confidently affirm that the body thinks," in the sense of ready assent and compliance. In this ready response of the whole Outer to Inner conditions, we find that in pantomimic action the psychic approach is first shown in the face, the eye leading the features. The hand becomes the agent for bringing all objects into the field of consciousness that are at such a distance from speaker and audience as to require pointing out, or bringing into the field of vision. This law follows, whether the objects exist in the material or the immaterial sphere.

We assert this to be the primary office of the hand in the Art of Expression.

In the slow process of development, if we consult the facts presented by the theory of evolution, we find the hand and arm, as an agent, lending itself to the Vital uses of the animal. So we shall find this agent, as a structure, has in long reaches of time adapted itself to its environment, *and has shown* (see page 99) *a constant and progressive development along the paral-*

els of Structure, Function, and Utility; until now, in the highest forms of Speech Art, it becomes, next the face, the most expressive agent the Soul has at its command.

Primarily, then, the hand and arm is the agent of the Vital nature. It discloses the activity of the Vital Being.

The fore-limbs of all the other land mammals never release themselves from service to the Vital. Their use is locomotion and occasional prehension, and their release in man came slowly and painfully, and in exact correspondence with the differentiation of the brain.

The story is told with significant force, when we find that with the other mammals the fore-limbs are united to the trunk and serve the body, while with man the fore-limbs are structurally united with the head and serve the Being.

So we may confidently conclude that the three natures of man — the Vital, Emotive, and Mental — will disclose themselves, not alone through the body as a whole, through its separate agents as parts, but also through zones of the separate agents.

As we have shown in our last chapter, the arm and hand, through structure, has three centres of motion, — the centres of the shoulder, elbow, and wrist.

Gestures from these centres translate the states of the Being.

(b.) It is reported from various sources that Delsarte

taught the shoulders to be Vital in significance; the elbow, Emotive; and the wrist, Mental.

The student should bear constantly in mind that such broad statements, if they were given by Delsarte as a part of a system of philosophy, must have been founded upon data carefully observed, duly considered, and at length formulated into conclusions that bear the force of law. Broadly speaking, it seems true that in the gestures of the shoulders the Vital nature predominates; in those of the elbow, the Emotive; in those of the wrist, the Mental.¹

Let the student suspend judgment until he shall have thought through a great number of analogies and correspondences that lie near the surface of our subject; he will thus refresh himself for the study of some years that must precede his enlightenment.

Let us consider each tract or division of this agent, and see what grounds founded on structure, function and utility there may be for the higher use of the instrument in Expression.

OF THE SHOULDERS.

The gestures of the shoulders are Vital in significance. It is true that our strongest emotions also move the shoulders; but the logic of structure seems here apparent, and if forced to classify we must decide them to be Vital. The torso and shoulders are knit together by strong bands of

¹ While this treatise is going through the press, Miss Genevieve Stebbins' *Delsarte System of Dramatic Expression* (Edgar S. Werner, New York) is before the author. The lady is supposed to reflect, mainly, the theories of Delsarte, as held by Mr. Steele Mackaye.

We quote Miss Stebbins (p. 107): —

1. The shoulder is the thermometer of sensibility and passion.
2. The elbow is the thermometer of the affections and self-will.
3. The wrist is the thermometer of Vital energy.

muscles, and act together in all Vital movements.

When the torso is dilated and pushed forward, the shoulders accommodate themselves to the movement and are thrown backward.

The square shoulders, with chest eccentric, are Vitally aggressive. This is the military attitude.

The shoulders brought forward, with chest concentric, are everywhere signs of physical and psychic weakness and suffering.

With three agents in concentric action, viz., the head, torso, and shoulders, we have the language of despair.

(c.) The Mental and Emotive blends, or composite gestures, springing from the Vital genus, are full of expression.

Both Delaumosne and Arnaud have called the shoulders the *thermometer* of the passional life.

This seems a happy term. For the shoulders seem to be a veritable register of the *intensity* of passion. In the heat of passion this Vital thermometer marks degrees. Thus, slight sensibility is indicated by slight shoulder movements. In great passions the shoulders disclose a wonderful freedom of gesture; sometimes the shoulders are thrown upwards to the ears.

Sulky and obstinate children often raise high the shoulders. This means passionate resistance.

It is a blend of the Emotive and Vital states. In vernacular there is truth. The street gamin's description of his fight is full of literal and exact truth: "I got my back up, humped myself, and pitched in!" In Sir Charles Bell's "Anatomy of Expression," the student will note a life-like figure of a man shrinking back in abject terror from some fearful danger. His shoulders are lifted to his ears, and the expression of *intensity* strikes the observer.

And Darwin somewhere quotes from that close observer of human moods, the authoress of "The Brownlows," this description of a youth who determines not to obey : —

"He thrust his hands deep down into his pockets, and set up his shoulders to his ears, as much as to say, 'Come right, come wrong, this rock shall fly from its firm base as soon as Jack would.' " But as soon as the child "got his own way," he put his shoulders into their natural position.

A blend or composite gesture of the shoulders, the shrug, has great significance.

Vital at root, it shows an invasion of the Mental nature. The Mental rules in this expression. It is rarely used in high Emotive states. It almost always is used in connection with turning outwards the hands to show the palms, as much as to say, "You see I am wholly helpless!" So this gesture expresses with great force helplessness, inability, impotence.

It presents strongly another Mental phase. It is, universally among the Latin races, the symbol of patience. Hence the artist's term, "patience muscles," applied to the muscles which raise the shoulders.

Shakespeare makes Shylock say : —

"Signior Antonio, many a time and oft,
In the Rialto you have rated me
About my moneys and my usances;
Still have I borne it *with a patient shrug*;
For sufferance is the badge of all our tribe."

Reasoning from structure, function, and utility, the primary and natural language of this agent would seem to be Vital, the Mental and Emotive natures disclosing themselves through

this agent as blends or composites. So we may have from the shoulders gestures from the Vital nature as their natural and primary expression, and blends or composite gestures showing invasions from the Mental and Emotive into the Vital Being.

And these gestures, like those of all the agents, are translated through three primary forms of motion, — eccentric, concentric, and poise, — and through the blends or composites of these primary forms.

OF THE ELBOW.

The gestures of this agent are Emotive in their significance.

The language of gestures from this second centre of motion of the fore-limb is, with all mammals save man, Vital in significance. In all land mammals it is one remove from the centre of motion nearest the body, and in most it is the first free centre, — the centre nearest the body being bound closely to the side.

In man the assumption of the vertical and the liberation of the fore-limbs has given three free centres.

We may formulate this freedom of expressive man thus : —

THE FREEDOM OF THE THREE CENTRES.

I. *The Vital moves all parts of the arm from the centre at the shoulder.*

III. *The Emotive from the centre at the elbow.*

II. *The Mental from the centre at the wrist.*

So, the Vital nature moves the greatest mass, and the Mental nature the least mass.

A curious relation of intelligence to mass in a mammal is seen in the gestures of the ear of the horse.

(d.) These three centres translate the three states of the Being. The Emotive is the middle term in the applied logic of expression. So we repeat our statement that the shoulder manifests the Vital nature, the wrist the Mental, and the elbow (the middle centre of motion) the Emotive.

And this agent, as all the other agents, has three primary motions — the eccentric, poise, and concentric — and the blends or composites of these primaries.

We give the language of the three primary gestures of this agent: —

1. *The elbow in poise indicates ease, self-possession, calmness, an equable temper, modesty.*

2. *The elbow eccentric (turned outwards) indicates strength, audacity, arrogance, abruptness.*

3. *The elbow concentric (turned inwards) indicates impotence, constraint, subordination, weakness, humility.*

(e.) The student will note that these inflections are immediate correspondences and reveal the state of the Being that dominates consciousness at the instant.

Nor should these gestures be taken alone, for it is through the aid of assisting agents that the gestures of any single agent get their highest significance.

Thus, in the instance of a man preparing to fight, the torso, head, shoulders, fists, as well as the elbows, are eccentric in form and motion.

The *nature* of the fight he is about to enter will inevitably show itself through the comment of assisting agents. The finest comment from the Mental and higher Emotive will declare itself through the face, and the comment of the Vital will be shown through the clenched fist (never absent in Vital action) and the firm set teeth *on the left side of the mouth*.

Bulwer, in "Kenelm Chillingly," has finely made this distinction between Vital and higher forms of aggressive action. He says: "The natural desire of man in his attribute as fighting animal *is to beat his adversary*. But the natural desire of that culmination of man which we call gentleman is to beat his adversary *fairly*."

We may then decide that the gestures of the elbow are at root Emotive in significance, and that the Vital and Mental natures show themselves as blends or composites.

OF THE WRIST.

The wrist is the centre of motion for the hand. As we have indicated in another part of this work, its structure conclusively shows that it is guide and directing agent for the hand.

It accumulates the motion of the two upper centres and reproduces both the freedom of the shoulder and the firmness of the elbow. In connection with the rotary motion it makes possible all forms of presentation of the hand. We have the implied authority of Mantegazza, that the language of the wrist is Mental in signifi-

cance. Indeed, its pliability, its suppleness, its directive power, its wonderful strength, its relative position to the elbow and shoulder, all tend to confirm the conclusion of this profound observer.

(f.) The student hardly needs to be told that the orator must have great suppleness and freedom at the wrist. An awkward wrist will spoil a graceful hand. Remember, the grace of presentation is in the wrist.

OF THE HAND.

Next the face the hand is the most expressive agent at man's command. It is interpreter of all languages. It is translator of all tongues. With the aid of the face it can disclose all moods of the soul.

And its structure predicts its importance in the economy of art, as well as its more evident importance in the economy of life.

Let us formulate these points of structure :—

1. *The hand is a structure forming the end of a pliant chain with five sensitive lengths, and capable of the widest and freest range of motion.*

2. *The bones of the arm and hand decrease in length and size from the shoulder downwards. This structure gives an instrument capable of projecting radial lines ; each segment, from the shoulder downwards to the tips of the fingers, forming an independent radius.*

3. *As the bones of the structure decrease*

in length, size, and strength, the muscles and nerves increase in complexity and distribution.

Now, given such an instrument — capable of executing all forms of motion — and endowed by its nervous structure with a fine sensibility; and further, set this instrument out and away from the great centres, the torso and the head, what would a philosopher from another sphere infer as to its place among the expressive agents?

“Ah!” he would exclaim, “such a formidable instrument could only be of service to a being of high endowments. Such a being would make a ready acquaintance with its environment, and would soon outstrip in intelligence all other beings bearing the same general structure.”

We may trace man’s advance from brute conditions in these successive differentiations of wrist, palm, thumb, and four sensitive lengths. No correspondence is plainer than that existing between the intelligence and the hand. The kind, quality and amount of intelligence in the lower animals is plainly indicated by the structure of the part answering to the human hand. Anaxagorus said, with wonderful prevision: “Animals would have been men had they had hands.”

(g.) That the sense of touch should be the measure of intelligence in the animal is a necessity of a nervous structure acted upon by an environment of matter and force.

Herbert Spencer has shown, by a wonderful chain of inductive reasoning from natural facts, that in the sense of touch commenced the evolution of the other senses.

In touch, we still find our strongest verification for our other sense impressions.

Take a few examples from the great scientist's illustrations. It will be admitted that, among birds, parrots show the greatest amount of intelligence. This difference rests in the greater development of the tactual organs. Few birds can grasp and lift an object with one foot while standing upon the other. The parrot does this with ease. The tongue, too, of the parrot is large, free, and constantly in use. But, more than all, what it can grasp it can raise freely to its beak, so it easily touches with beak and tongue what its hand already grasps.

So among mammals, as a general rule, those whose limbs terminate in digits are more intelligent than those with hoofs. Thus the cat, the dog, the fox, show a higher intelligence than the ox, the sheep, the deer.

Five sensitive toes are better than one or two masses of horn to receive complex impressions. But most conclusive of all is the hand of the half-reasoning elephant. The trunk of this animal proclaims its superior sagacity. It has entire freedom of pliant movement. It can project its single arm into space, and with its hand touch all parts of its body. With its hand it acquires a knowledge of form and weight. It tests the strength of the bridge it must cross. It gets an idea of motion by fanning itself with branches of trees it breaks off; of hydrostatics and aerostatics by raising and throwing water over its back and by trumpeting forth blasts of air.

In the anthropoids points of structure proclaim the animal's limitations. In the acts of prehension and locomotion the anthropoid is greatly superior to man. All the limbs end in Vital hands. And there is no doubt that the ape has perceptions of size, form, hardness, weight, flexibility, and tenacity. Bound to the Vital zone, its expressions are Vito-Vital in significance.

We may conclude, then, from our consideration of the structure of the instrument, that the

human hand will disclose a vast number of correspondences existing between the soul, the body, and the remote environment. Hence Delsarte said of the hand that it is the intermediate agent of the Soul.

In disclosing inner states we have called the language of the shoulder Vital, of the elbow Emotive, of the wrist Mental.

Which of the three states of the Being does the hand disclose? We answer, Each and the three. Like the will it lends itself to the state of the Being while in action. And we may say that the hand is the intermediate agent in bodily movements, as the will is the intermediate agent of the three states of the Being.

The hand epitomizes the body. Like the body it has its zones or divisions through which the states of the Being seem to manifest themselves by preference.

We may call this preference of the Psychic for a certain tract of the hand, or of any other zone of the body, the *natural language* of that division. So we may say without violence that the natural language of the head is Mental, of the torso Emotive, of the limbs Vital. And we shall find ample grounds for like conclusions in regard to the language of the hand.

We make a threefold division. The palm is Emotive, the thumb is Vital, the forefinger is Mental; the second and third (the ring finger), taken together, are Emotive, and the little finger is sensitively Mental.

Let us consider these tracts of the hand separately. We will make our observations from three points of view: (1.) Through points of structure and function. (2.) Through suggested correspondences. (3.) Through modes of motion.

OF THE PALM.

We have declared the natural language of the palm Emotive. Let us see if we can find good reason for giving this large tract of the hand to the Emotive Being.

(1.) *Structure.* The microscope is said to disclose the fact that the pores of the skin are more numerous in the palm than in any other region of the hand.

Function. Through the pores of the skin a large amount of waste matter is thrown off.

(2.) *Correspondence.* These facts of structure and function would seem to give a physical and structural basis for the widely entertained idea that emanations from our affectional or spiritual natures go forth from the palms of the hands more copiously than from any other part of the body.

(h.) The student will note how general and wide-spread are these correspondences, founded in structure and function. Thus the laying on of hands, to signify the giving of spiritual force, has been a leading ceremony in all the great religions of the world. The placing of the palms upon the head, in blessing, has been the strongest token of affection with the leading races of mankind. Jacob and Christ blessed with the hands. The closing exercise in our

churches is not an unmeaning one; the willing of good with extended arms and open palms upon the whole people is beneficent giving. Add the outgoing breath to the palm turned outward, and you have the spiritual blessing the human.¹

(3.) *Motion*. The presentation of the palm is full of significance. Through structure and motion the palm is enabled to make three presentations: 1. The palm prone. 2. Supine. 3. Vertical. Each of these presentations speaks its own language. Each is a revelation of the Psychic.

The natural language of the prone palm is repression; of the supine, releasing or giving; of the vertical, repelling.

The supine permits. It says: "Yes, take, I give." The prone prohibits. It says: "No, I forbid." The vertical repels. It says: "Go, I push you away." Again: the supine is impulsive, the prone compulsive, the vertical repelling.

The right hand uplifted, palm vertical, epitomizes both body and Being. It represents both the exterior and the interior as one. It says: "I take this oath. I solemnly swear. I call God to witness and so manifest, or show my hand

¹ We find in the most recent treatise upon the Delsarte system, Miss Genevieve Stebbins' book (see p. 89), that the natural language of the palm is given as Vital. This is supposed, also, to be Mr. Steele Mackaye's idea. We quote Miss Stebbins: "The palm is Vital in nature, *revelatory* in expression."

From the first part of this statement we feel obliged to dissent for reasons just stated. With the second part of the proposition we can agree; if the word "*revelatory*" (newly introduced into the English language by the authoress) be a synonym for "revealing."

openly, to signify that my whole Being is in the act."

Thus we conclude the language of the palm to be Emotive in its significance.

OF THE THUMB.

Structure. A glance at the structure of the thumb discloses its natural language. It is Vital. It possesses the strength of all the fingers. Its bones are larger than those of the other lengths. It has greater compactness, in that it has but two lengths and two joints instead of three. It is bound firmly to the side of the hand, and receives and communicates the rotary motion of the elbow. It easily opposes and touches the extremes of each finger, and can describe two half circles, — one by a movement from its own centre, the other by a movement in connection with the motion from the centre at the elbow.

Its fleshy ball is the distinguishing characteristic of the human thumb. Indeed, this muscle may be said to make the extremity human. The chimpanzee, whose hand is nearest human, is bound to the Vital by the fatal limitation of a dwarfed thumb and ball.

Finally, structure indicates that, through position, size, free lateral movement, perfect mobility, power to oppose itself to the more sensitive lengths, the thumb may be classed as Vital in significance.

Correspondences. The correspondences that have crept into language are significant.

We say of a human tool that he was completely "under the thumb" of the man who used him. The Roman nobles, sitting in state at the gladiatorial shows, showed mercy by turning the thumb.

If they decreed the death of the prostrate gladiator, they held up their thumbs in the air. The thumb turned down was the signal to save him.

(i.) Shakespeare makes the witches in *Macbeth* scent evil through the thumbs : —

"By the pricking of my thumbs
Something wicked this way comes."

And so the servants of the two rival houses of Montague and Capulet showed their vital hatred : —

" 'Do you bite your thumb at us ?'
'We bite our thumbs !' "

The thumb is the Vital agent of the will. When the two other agents of the will act with it, it is well to retire from the contest ! For the corrugators that mark vertical wrinkles upon the forehead between the eyes is will manifesting from the Emoto-Mental Being. And now, if the canine teeth meet with lips tense, we have will born of the carnivora, — the most animal of our expressions of will. This last expression we may call Vito-Vital.

OF THE FINGERS.

Structure. We have already indicated, perhaps at sufficient length, the points of structure of the fingers. From the shoulder downwards

the bones have decreased in length, and the muscles and nerves have increased in fineness and complexity. We have now reached in these five sensitive lengths, the fingers, a great physical complexity of bones, muscles, and nerves.

To add to its sensitiveness and delicacy of discrimination, each finger has a little knot of nerves upon its inner extremity, fibres of which intertwine with the fibres of the muscles.

This uniting of the Psychic with matter is not without significance.

So we unhesitatingly say that while the thumb is Vital these sensitive lengths will disclose the Mental and Emotive states of the Being. And this truth is illustrated by their manifestations. In gesture, the thumb adds its Vital language to the Mental and Emotive language of the fingers. This accounts for the fact that everywhere the language of the fist means the same thing. It signifies *conflict* the world over. For, note, the thumb, which is Vital, binds the first and second fingers, which are Mental and Emotive. The gesture is a reflection from that "early morning of the race," when disputes sought the ready arbitration of brute and naked force.

(j.) The author of this treatise fancies that Delsarte began his observations upon human expression by noticing two gestures so universal in all races of men, more especially advanced races, as to compel the inference of a determinate cause underlying the phenomena.

These gestures are: 1. The closing of the lids of the eyes.
2. The use of the forefinger in argumentative states. The

gestures of the forefinger are Mental in significance. Mark the disposition of the fingers in this gesture: The thumb (Vital) bends inwards, and places its sensitive ball upon the nail of the second finger (Emotive), partly covering it. The third and fourth fingers bend slightly inwards. But note, the little finger (Sensitive-Mental) slightly separates itself from the third finger, and presents itself nearly straight and parallel with the forefinger.

Thus the Being has manifested its three states, and in this order: Vital, Mental, Emotive, Sensitive-Mental.

The gesture of the forefinger is the gesture of the Mental man. The Intellect is in full force and action. It is analyzing, separating, selecting, noting resemblances and differences. What the man feels is held in abeyance. In his gestures he only frees the forearm; when he feels deeply he will free the whole arm. When he wills strongly, and against formidable opposition, he will knot the thumb and fingers to make the end of a club with which to strike.

Mental sensitiveness and finesse rest in the finger-tips. Take an illustration: A great metaphysician is arguing and enforcing some nice point in the philosophy of Kant or Hegel. "Pure reason," or "The essence of the Being," is his theme. Note him carefully. See! he uses now both hands. He applies the sensitive ball of one finger to the sensitive nerve knot of another, or he taps the palm of his left hand with the forefinger of his right. Note him now! He is summing up in close logical terms. You observe that

he links together his fingers in chains. He uses both hands to make these chains. Now it is forefinger and thumb that are linked, now little finger and thumb. And now, in the refinement of Mental conclusion, he holds up in full view the left hand, and opposes the tips of the little fingers. Nothing can be more conclusive than this meeting of correspondences at the finger tips. He warms to the subject, and, taking the palm as a tablet, he strikes little blows upon it with the forefinger in his more forcible moods, and with his little finger when he would express nice and critical distinctions. But now he strikes the palm with his fist, freeing the full arm, and you know that a blend of the Vital and Emotive natures has leaped into the saddle and seized, for the instant, the reins of consciousness.

And so this great agent of human expression, the hand, epitomizes the three natures of man. Thus the Outer discloses the Inner.

(*k.*) We cannot leave this great agent of the Soul, the hand, without some reference to its significance as an art form; epitomizing the elements of the highest beauty in its symmetry and proportion, and the harmony of the highest gracefulness in its motion.

Artists agree that no part of the human body is so difficult to represent as the hand. Said Grimm: "Nothing makes us so certain, at the first glance, where an artist stands as his manner of forming the hands."

The human hand is in form an harmonious whole; for it presents the two elements of beauty according to the dictum of Aristotle. It gives (1) Uniformity through its straight lines, and (2) Diversity through its curves.

The fingers are straight lines, but how easily they glide into curves! Note a few of the curves: (1.) The curved line leading from the inner wrist to the first joint of the little finger. (2.) The curves of the large muscle of the thumb. (3.) The curves of the hemispheres at the ends of the fingers. (4.) The curves of the shields, — the finger-nails.

Note the element of variety introduced by the difference in the length of the fingers. These lengths are made sensitive to the highest degree by the knots of nerve matter which lie underneath the skin of the ball of each finger.

In effect, this little knot of nerves puts the Psychic at the finger-tips whenever art forms are to be produced. For there is a systematic arrangement and a sympathetic agreement of parts from the shoulder to the tips of the fingers. Intensity in the shoulders; firmness in the elbows; strength in the wrist; finesse in the fingers.

So the hand, with Reason to guide it, makes all mechanics possible.

We have called attention to its structure of bones, joints, muscles, and nerves. Strength and solidity characterize the lower limbs; but twenty-nine bones, arranged in segments, covered with pliant muscles vitalized by roadways of nerves, make the most formidable instrument at man's command.

How this wonderful instrument has helped enforce correspondences with the globe we shall attempt to unfold in our next chapter, to which we ask the student's most serious attention.

CHAPTER XII.

FURTHER CONSIDERATIONS. — THE REALM OF CORRESPONDENCE IN GESTURE.

THE great masters of primary instruction founded their methods upon the science of Space, — Geometry.

In this they took the plain road that the nature of the child pointed out. They taught, first, lessons of Form, by letting the child see, handle, and trace the surfaces of objects.

Froebel used the cube and the ball; Pestalozzi, the square and the circle; Herbart, the triangle.

And this old method is now again the new method. It was always Nature's method. Said these great teachers of children: "Let these little ones touch, see, handle, give motion to, test resistance of, count with, add to, subtract from, material objects." They placed the ladder on the earth, and put the child's foot upon the first rung, and turned his face towards the horizon.

They knew that as surely as the plant grows toward the light, so surely the Being of the child would climb towards the spiritual. So Froebel epitomized his philosophy of education when he

said: "I use these objects, and let the children have them, that they may become to them, at the last, forms of life, truth, and beauty." And this is the most essential service that physical science can render humanity; to show that, everywhere and always, the material types the spiritual, and that no manifestation can be unless a somewhat manifests. For these forms and forces of matter lead not to a blank wall! They are the outer phenomena of the inner life. And could we push inference — that faculty of the mind which corresponds with physical seeing — far enough, we should see with this wider vision that all Expression rests in the great Law of Correspondence, recognized as the foundations of their respective systems of philosophy by Plato, Oken, Goethe, Swedenborg, Wordsworth, and Emerson, and practically applied by such great teachers as Froebel, Pestalozzi, and Francke.

(a.) We may restate the Law of Correspondence, which the student will find considered more at length upon p. 50 of this treatise: —

Law: Man expresses his psychic states in the terms of his environment. These terms are related to, and correspond with, Space, Time, and Motion.

Or we may make another statement of the Law: —

The Outer (matter), with its forms and forces, is type and symbol of the Inner (Psychic), and is its correspondence.

The broadest interpretation of this law is that all forms of matter, whether organic or inorganic, disclose the Psychic directly or remotely.

See how far-reaching is our conclusion. The Universe of

matter, presented as phenomena, is Outer; God is Inner. Behold the Macrocosm!

And by parity of reasoning, justified by deductions from the most advanced science of to-day, the human body is Outer, the Psychic is Inner. Behold the Microcosm!

Let us consider, with what degree of definiteness we may be able to command, certain correspondences, founded "in the nature of things," that go to make the gestures of the hand and arm so expressive. Let us reiterate what we have before said, that the Soul finds its direct and open correspondence in the body; hence, we have called the body its near environment. It finds its indirect and more subtle correspondence in all things else. All things else, then, we have called its remote environment.

It was a happy phrase of Delsarte, that the hand is the intermediate agent of the Soul. The expressions of all the other agents are intensified through its action. It reinforces their language. With truth we may say that only as the hand became human did it begin to be used to interpret remote correspondences. Only nebulous ideas of what filled the upper and nether voids crept into the mind of the half-human representative of the quaternary period.

And the savage of to-day peers into the spaces above him, and, pointing with his hand, says: "Up there are the goods and the gods!" And pointing towards the earth's centre, he says: "Down there are the evils and the devils!"

Then sweeping the line of the horizon with eyes and hands, and looking outward from his body, he says: "Here and roundabout are the things that are, — trees, mountains, plains, rivers, horses, buffaloes, enemies, and myself!" Admirable savage! Admirable philosophy, and most competent, based as it is upon the universal testimony of the senses! The civilized child agrees with you; and as we all came along the road of childhood we all agree with you! For have you not fixed, inexorably, relations, analogies, and correspondences, so that for all time to come men shall speak out their Vital survey of things in your language, — the language of what seems to be?

In the preceding two chapters we have attempted to give the rationale of this our first and most persistent correspondence, always and ever present to us. Let us enforce our argument by the use of the figure of the globe.

(b.) At the risk of repeating ideas that we have given in another form, and in another part of our treatise, but to make plain a central point in our discussion, we ask the student's close attention to the following statements: —

(1.) *It is impossible to give free play in all directions to the hand and arm without producing a series of curved lines.*

(2.) *The widest and freest sweep of the instrument describes arcs of circles; and these arcs described by both arms project the figure of a globe.*

(3.) *Through the limitations, fixed in structure, the hand and arm projects the globe, and thus becomes the fit instrument of the correspondences of two worlds.*

Through the action of the nervous system it becomes in-

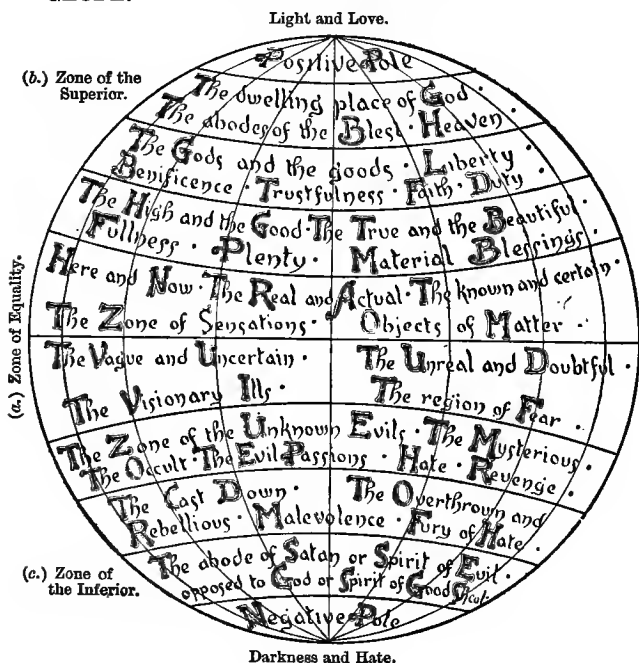
evitable that what we receive as impressions we give forth as expressions.

The visible hemisphere has most constantly impressed man's senses. He will therefore state his Vital, Mental, and Emotive correspondences in terms of the globe.

Head, torso, hand, face, voice, speech, every agent of expression, must conform to this central law.

It is not without reason that the old metaphysicians made the globe the symbol of wholeness and entirety. We ask the student to most carefully ponder the correspondences existing between the objective and subjective worlds, as illustrated by the figure of the globe.

THE LAW OF CORRESPONDENCE ILLUSTRATED BY THE REVELATIONS AND IMPLICATIONS OF THE GLOBE.



EXPLANATORY NOTES.

(a.) THE ZONE OF EQUALITY. — Of the three zones of the subjective world,¹ man alone inhabits and corresponds with each. Animals — even those nearest him in physical structure — bound by instinct inhabit only the Zone of Equality. This zone we might call the zone of the Vital.

Here the body, as organized matter in form, maintains its equilibrium with its environment. It lives. This zone is the zone of the objective real, and of its subjective counterpart, the ideal. This is true only with man. To no other animal is there a subjective correspondence definite enough to be called ideal.

Here are the objects that we may know by handling and by the reports of our other senses.

This is the zone of man's greatest activities connected with matter.

(b.) THE ZONE OF THE SUPERIOR. — The spaces above the Zone of Equality, above the tops of the mountains whither primitive man could climb, are the Zone of the Superior.

So far as we know, or have any record, there is no race of men which has not associated, in some dim way, the upper spaces with well-being.

There, in the upper space, was the "Heofon" (the upheaved) of our Saxon ancestors. There, the abode of warriors and heroes who had fought well on earth. There, absence of all ills and discomfiture of all enemies.

When Christianity had leavened this Saxon savage, there he placed God, the angels, and the saints.

And so strong is this instinctive leading in our natures that there in the upheaved are the "many mansions" prepared from the foundations of the world. There the loved and lost with light in their faces await us. Ah! the analogies and correspondences of the Zone of the Superior are

¹ The student is referred to page 145 of this treatise for a fuller discussion of the correspondences of the two worlds.

pathetic, and how enduring ! What wonder that gestures of face, hand, and voice are so instinctively bound to this region of the beatitudes !

(c.) THE ZONE OF THE INFERIOR. — To primitive man what was beneath the surface of the earth was hidden and unknown. Before he had an idea that he lived upon a round ball he located the obscure, the harmful, the evil, downwards in the bowels of the earth. The evil mysterious dwelt in the nether voids and caves, as the good mysterious dwelt in the clear light of the upheaved. Doubtless the darkness of caverns and the smoke and fire from the craters of volcanoes strongly wrought upon the imagination of the primitive races of men.

So in the underneath they built the abodes of the evils and the devils.

Appealing to this crude but universal instinct that builds objective correspondences of subjective states, Dante constructed his *Inferno* and Milton his *Hell*.

So the two grandest poems written by man have peopled the nether spaces with their gigantic imagery ! With such a fearful leading as Nature has given in the apprehensions of man, is it strange that our gestures should enforce our darkest passions by correspondences with the Zone of the Inferior ?

We thus see how inevitable it is that man shall express himself in terms of the globe. Continually impressed by the visible hemisphere and by the restrictions of Space, Time, and Motion, he will inevitably express himself in the terms of his environment ; and if we had the power to formulate these expressions, we should reach that ultimate ground upon which a science and art of expression would securely rest.

We are able, then, to state broadly, and with all the force of law, that our gestures repro-

duce the elements of Form and Motion in correspondence with Space and Time, and from necessity.

*Expressive man reproduces, through form and motion, correspondences of his psychic states in exact terms of the globe.*¹

We ask attention to a few of the correspondences which root themselves in our ideas of Space : —

Gestures of the hand and arm sweeping through wide spaces indicate grandeur, largeness, comprehensiveness.

(1.) *Through wide spaces of the Zone of Equality, reference to great material or social interests.*

(2.) *Through wide spaces of the Zone of the Superior, the greatness and grandeur of ethical and spiritual interests connected with man's well-being.*

(3.) *Through wide spaces from the Zone of the Superior through the Zone of Equality and ending in the Zone of the Inferior, the rejection of things that oppress.*

Thus the space we sweep through with the hand and arm becomes a measure of the greatness and comprehensiveness of our ideas.

Let us note the correspondences existing from our ideas of time as indicated by gesture : —

¹ How evident the foundation for the *Nine Laws of Gesture* accredited to Delsarte, — how natural the confusion as to their number and order existing among his disciples !

(1.) *Gestures sweeping through long arcs in slow time correspond with poise of the Being. They have dignity, majesty, and strength in composure.*

(2.) *Gestures sweeping through long arcs with quick motion add intensity to majesty and strength.*

They lose in poise and dignity, but gain in power and strength. They show an invasion from the Vital side of the Being.

(3.) *Gestures sweeping through long arcs, and ending in attitudes that draw the body upward along the vertical line, disclose the Emotive Being manifesting its highest moods of power and strength.*

Thus the Inner corresponds with the Outer. The physical agents moving through space in time indicate the quality, amount, and intensity of the psychic energy.

(c.) The student will note that in the law of correspondence is found the only justification for such empirical statements as are accredited by his followers to Delsarte. Take, for example, this statement of "The Law of Velocity:" —

The velocity of gesture is in proportion to the mass moved and the power moving.

Read this in terms of correspondence, and we can readily see that wide effects of gesture and voice must accompany grand conceptions.

Here we find the root of the art of burlesque. Burlesque is the art of giving ideas a disproportionate setting forth, so we have the antithesis of grand gestures with sonorous voice fitted to a trivial theme, or perhaps a grand theme treated with trifling and inconsequent voice and ac-

tion. Shakespeare sensed the true law of values and proportions when he wrote : —

“Suit the action to the word,
And the word to the action :” —

which was a unique way of enforcing outer correspondences of inner conditions.

The hand and arm, as a necessity of structure, projects and traces arcs of circles from three centres of motion. Each of these arcs has its psychic significance rooted in the correspondences of the sphere, as form, and with the oscillations of the pendulum, as motion. These arcs may be traced in both vertical and horizontal directions, and by the sweep of the instrument from either of the three centres. The arc traced by the hand and arm moved from the centre, at the shoulder, will have the greatest sweep, and hence will show correspondences with the grandest moods of the Soul.

Gestures moving through wide spaces and in slow time express the poise of the Vital, Emotive, and Mental natures.

The arcs traced from the centre of motion at the elbow are smaller, as the pendulum sweep is through less space. As will be inferred, they express largely blends of Emotive and Mental states.

Arcs traced from the wrist centre are still smaller. They express mainly the comment of the Mental upon things near at hand. They observe, separate, and discriminate, and by the aid

of the fingers express Mental sensitiveness and nice discernment.

Thus man, in reproducing in Space and Time, through nervo-muscular motion, these arcs of the sphere, prophesies the unrestricted; so, he allies himself with the Infinite and the Unrestricted. Thus is the Hebrew Scripture justified in its sublime declaration that Man was made after the likeness of God.

We cannot leave our "Realm of Correspondence" without reference to the correspondences wrought into our very Being—to appear through life as expressions—by the most formidable and far-reaching of Nature's agencies, itself the correspondence of the constant and the inevitable.

We refer to the great Law of Gravitation. From earliest childhood we have been impressed by the phenomena of gravitation. Our childish comment stopped short at appearances. Things heavy fell to the ground or were hard to lift from it. Things light floated in the air. The heavier the body the quicker it fell, the lighter the slower its fall.

Now, this lesson of the gravities of things is straightway and constantly reproduced in gesture. What are these inevitable correspondences but the effort of the Psychic to give values? Let us imagine any agent, say hand and arm, or muscles of the face, set in motion through psychic energy and describing arcs in certain directions, through certain spaces, and in certain

times, and the following correspondences are inevitable : —

(1.) *Downward gestures correspond with our earnest, emphatic, and most important moods.*

The height from which the gesture falls indicates the importance and gravity of the mood. The swiftness with which it falls—i. e., the time it takes to fall—indicates the intensity. Combine height and swiftness, and you indicate great passions in great heat. Combine height and slowness, and you indicate great passions under great control.

(2.) *Upward gestures correspond with our light, unemphatic, volatile, and least important moods.*

But the depth from which the gesture proceeds, the direction in the upper spaces to which it tends, the time given it, the form of the figure it describes, the zone of the body, or the agent from which it proceeds,—all these circumstances are so many comments upon the character and significance of the upward gesture.

(3.) *Poised gestures (i. e., gestures held in equilibrium) correspond with poise of the Being.*

These gestures are the significant symbols of the grand moods of the Soul.

The higher Emotive states, in strict accordance with the law of correspondence, draw upwards the body in space along the vertical line.

It is the Outer or apparition projecting itself in as large a form as possible, as if it would represent the stability, dignity, and wholeness that a mountain stands for in a landscape. That was a happy conceit of correspondence, of the English prelate, who declared Daniel Webster to be "a walking cathedral."

(*d.*) The lead given by Nature in her law of gravitation is wonderfully broad and adequate in its application to gesture.

Let the student note a few correspondences based upon our sense of gravity : —

(1.) OUTER EXPRESSION. — The hand thrown obliquely upwards — accompanied by snapping with the thumb and second finger — is our action when we throw away (upwards) some object of little importance or value.

INNER CORRESPONDENCE. — By this gesture we reject trivial ideas. Hence ideas we scorn, or treat lightly, we throw into space.

Intense scorn or belittling adds to the gesture of snapping with thumb and finger some play of the face, as an askance look, or a measuring of the person with the eye from the feet upwards. We look him over, that is, we quite over look him, find him trivial and worthless, and say by a complexity of agents in action, "He's not worth . . . that!"

Take the antithesis of this action.

(2.) OUTER EXPRESSION. — Hand thrown obliquely downwards and backwards, palm prone, is our gesture when we throw away things we do not want, things that are in our way.

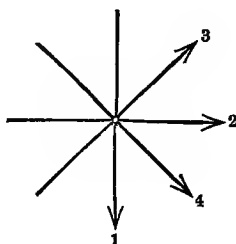
INNER CORRESPONDENCE. — By this gesture — if starting from the Zone of Equality — we throw away ideas that annoy us, but have not weight enough to oppress us. But if the gesture starts from the Zone of the Superior, we cast down ideas that we fear, hate, or that oppress us.

A curious gesture of the deaf and dumb, and one often used, when they would express their sense of an insignificant or contemptible person, is to roll an imaginary tiny bit of matter between the thumb and forefinger, and then flip it upwards.

These correspondences we would argue to be universal. They are older than spoken language, and are its accompaniment and interpreter. Strabo curiously mentions the sign of "I don't care," or "It is not worth," in use three thousand years ago.

He wrote: "At Anchiale there is a monument to Sardanapalus, a stone statue of him, as if snapping his fingers." An inscription in Assyrian reads: "Sardanapalus built, in one day, Anchiale and Tarsus. Eat, drink, and play; the rest is not worth . . . that!"

The following diagram will represent the significance of direct and oblique lines of gesture, traced by the hand and arm:—



1. *The vertical line expresses affirmation. The correspondence is that of assent, acceptance, agreement, certainty.*

The height from which the gesture falls indicates the largeness or importance of the acceptance, agreement, or affirmation.

The quickness, or time, of the gesture indicates its heat or intensity. The head uses the same gesture to express affirmation.

2. *The horizontal line expresses negation. The correspondence is that of denial, non-agreement, opposition.*

In space nothing denies or opposes the vertical so completely as the horizontal. This gesture of the head is well-nigh universal for "no," as the vertical is for "yes."

3. *Gestures tracing oblique lines upwards and outwards express the rejection or throwing aside of light or trivial things.*

4. *Gestures tracing oblique lines downwards and outwards express the rejection of heavy or oppressive things.*

In concluding our discussion of gestures of the hand and arm, it will be seen that they fall readily into the two classes discussed at length in Chapter X. of this treatise: (1.) Gestures referring to objects whether real or ideal. (2.) Gestures manifesting states of the Being.

To this classification we might add a third: (3.) Gestures that are composites or blends of the two classes.

These gestures correspond with complex states of the Being.

We then shall have all gestures classified as objective, subjective, and blends or composites.

(e.) The student will note that this classification includes all possible gestures.

Take an illustration of each of these classes : —

1. OBJECTIVE. — The comment of the Psychic upon a distant mountain put into gesture of the hand and arm. The gesture marks the position of the object in space, and outlines its main feature of form. We may call this a Vito-Mental comment of the Being.

2. SUBJECTIVE. — The Soul's communion with itself in view of a dreadful crime. The King in Hamlet : —

. . . " But, O, what form of prayer
Can serve my turn ? Forgive me my foul murmur ?
That cannot be ; since I am still possess'd
Of those effects for which I did the murmur ! "

Here the gesture would be concentric. The use of both hands would show the intensity of feeling. The torso would be the agent most deeply affected. The face would show the deep Mental distress. The hand directed towards upper torso and head, the nature of the remorse. The whole body would give slow pendulum swing under the sway of the Emotive nature.

3. BLENDS. — Complex subjective and objective states. Milton's Satan, cast into Hell, attempts to find a refuge in Space : —

" Which way shall I fly
Infinite wrath and infinite despair ?
Which way I fly is Hell ; myself am Hell ;
And in the lowest deep, a lower deep
Still threatening to devour me, opens wide,
To which the hell I suffer seems a Heaven ! "

Here the gestures would alternate between eccentric and concentric. The correspondences with space and time, as will be surmised, would give high and broad action and slow time, to mark adequately the grandeur of the poet's imagery.

A few words should be written here, technical in their significance, based upon our analysis. Whether a gesture shall be effective before an

audience depends upon a variety of conditions, but chiefly upon the condition that it shall correspond with the psychic mood which the orator would arouse. An effective gesture must institute the following relations. It must bear reference to : —

1. *The zone of the projected globe towards which it is directed.*

2. *The zone of the body from which the gesture proceeds or towards which it is directed.*

3. *The direction it takes, and the point of elevation or depression at which it terminates.*

4. *The time or rate of the gesture, whether it be slow or fast.*

5. *The space swept through by the gesture, whether vertically or horizontally; or if the gesture be an attitude, the space and time held by the agent.*

6. *The kind, proportions, and symmetries of the figures which are described, whether by straight lines, curves, or composite lines.*

Finally, let the student note the broad correspondence between the higher Emotive nature, declaring itself through poise, and the globe, symbol of wholeness and entirety.

Delsarte has been credited with the statement of the law of poise.

Strength at the centre gives freedom at the surface.

Let the student bear constantly in mind that

it is always the centred Psychic that declares itself as freedom through the poise of the expressive agents. Gesture, without significance, is only a form of reflex action, an aimless discharge of vital force. It is grimace in art. But precision, harmony, gracefulness, find their highest expressions in Poise, which is also the highest form of freedom.

CHAPTER XIII.

THE HUMAN FACE AS AN AGENT OF EXPRESSION.

WE are all unconscious physiognomists. Instinctively we scan the face to know the man. We say at a glance, without hesitation, and without effort of reasoning, of a stranger: "He is proud or deceitful;" or, "He is honest and trustworthy." When asked what we saw in that instant of time upon which to base so decided a judgment we are puzzled, and say: "Well, I don't know that I can give any reason, but I don't like his face; I am impressed that he is an unsafe man."

This is common testimony. It cannot easily be set aside. The art of interpreting the features by direct beholding and without conscious analysis is widely practised, and decisions based upon it are unhesitatingly pronounced. Said Darwin: "It has often struck me as a curious fact that so many shades of expression are instantly recognized without any conscious process of analysis on our part." So Shakespeare makes Lady Macbeth read at a glance her husband's distraction of soul: —

"Your face, my Thane, is as a book where men
May read strange matters."

"As for myself," said an eminent portrait painter, a close observer of human features, "faces almost haunt me; and I am so apt to judge a man by his face that I am sometimes fatally tempted to act the police and order an arrest!"

The human face presents a complex problem of resemblances and differences, and it is the differences that count; otherwise the marvel would be still more marvelous that we are able to distinguish a known face among a thousand strangers, and that, too, after the lapse of years. What amazing psychic faculty it is that recalls a face that for years has never once filled our consciousness! "I should have known you if I had met you in Japan, instead of here on Broadway; and yet fifteen years have passed since I last set eyes upon you!"

The problem of reading the countenance increases in difficulty, if we stop to consider the number of expressions possible to this surface, so small that its expressive region can be covered with a single hand. And there is a further increase of difficulty, if we consider that expression proper rests in motion, and so belongs to the movable features. The form of the forehead and chin are elements of proportion only, and without the movable centres of eyes, mouth, and nostrils have only the negative value of fixed form.

Delaumosne, student of Delsarte, somewhere

gives eight hundred as the possible expressions of the eye directed towards the three planes of vision. This at first blush seems an enormous exaggeration ; but if we consider the operation of the well-known law of permutation it is by no means incredible.

Think a moment ! There are but twenty-six letters in our alphabet, yet no valuable thought is in danger of getting lost for want of a sentence in which to imprison it ! Shakespeare used a wonderful vocabulary of fifteen thousand words, each word a permutation of these twenty-six letters.

Nearly one hundred thousand words in Webster's Unabridged, and one hundred and thirty thousand in Ogilvie's Imperial Dictionary, are permutations of twenty-six letters.

Now, suppose we apply this law to the moving muscles of the face. According to Moreau, there are fifty-five muscles that go to make this wonderful organic complex,—the human face. What wonder that the Soul, alarmed by the problem presented through this complexity of moving muscle, abandons the slow process of reasoning, cuts the Gordian knot, and solves the problem by intuition, or instantaneous impression made by the whole of the moving mass ! What delay would there not be if logic or mathematics should apply their slow processes ?

(a.) We fail to grasp the almost infinite number of new forms that it is possible to make from a limited number of lines or objects under the operation of this law.

Think of the endless combinations of various and novel forms that Nature presents, fashioned from the two kinds of lines, straight and curved !

Jevons, in his "*Principles of Science*," gives an illustration of the operation of this law in the deals of the fifty-two cards in whist. The number of distinct hands, in dealing to four persons, is so vast that twenty-eight figures can alone express it. If the population of the world, say one hundred thousand millions, were to deal cards day and night for an hundred thousand years, they would not exhaust one hundred thousandth part of the possible deals !

The play of the fifty-five muscles of the human face presents an intricate and baffling study of form and motion. And it is the whole tract of the face that we unconsciously coördinate to arrive at a decision. That physiognomy has not yet grown into a recognized science is not to be wondered at. In studies of the human face, there still exists that first confusion that puzzles the mind when confronted by a great number of complex phenomena. It is well to remember—if one is led to despair that such phenomena can ever be reduced to order—that alchemy led the way to modern chemistry ; that myth and miracle preceded authentic history ; and that the astrologer abused the silent majesty of the stars to foretell human destiny long before astronomy had its birth as science.

At present we have a mass of crude observations and unrelated deductions, which we cannot put into statement. Some day a keener vision will relate fact to fact, and conclusion to conclu-

sion; and what now seems conjecture will crystallize into certainty.

In our study of form and motion of the human face, let us recall the fundamental premise upon which rests all expression : —

In all organisms motion is manifestation : at the base, Life ; at the summit, Soul.

Man is the only being upon the earth whose manifestations are a synthesis of all form and motion possible to animal life. He is the only being whose expressions are the outcome of the three perfected natures of the Being.

So it is not strange that he is the only animal on earth that makes a *conscious* inward gesture; the only animal who lifts his face to the vertical; the only being on the earth who can think the thought, "I ought," — moved by an impulse higher than instinct. The expressions of all other animals proceed from the Vital, with only rudimentary traces from the Emotive and Mental. And we find in the mammals nearest man — the dog, horse, and elephant — that perception and memory, as in man, lead the Mental faculties.

So we find the expressions of the lion and the tiger wonderfully strong, when excited by fear or hunger, or when defending their young, or tearing the flesh of their prey.

In the truest sense, if we take account of expressions from the Emotive and Mental, Pliny wrote: "To man alone is given a face." And in man alone have face, hand, voice, and articulate speech become ultimate and final.

We state the law which governs all sentient Being, from the lowest forms of protozoa to man at the summit of psychic development.

Law: Psychic manifestations are in proportion to, and correspond with, their physical supports.

Mantegazza thus formulates the law: *Wealth of anatomy and wealth of expression always correspond.*

(b.) No sentient life exists upon the earth outside a body. The simplest life builds a cell and lives at its centre. The Psychic thus attempts to realize itself. If the Psychic be simple and homogeneous, its body will correspond, and the expressions possible to it will be few and simple. As structure advances in complexity, expressions become varied and complex. In the human body, structure has reached its highest and completest development. And we may confidently say that in the human face we find a structure with such delicate complexities of nerves, muscles, and membranes that no emotion is so subtle but that it may find a ground of display in this living mirror. So we may say, broadly, that the faces of animals give comparatively few psychic expressions, and these mainly Vital.

Among the mammals, the larger carnivora are wonderfully expressive in manifestations of the Vital nature. With them the muscular system is very large, and almost constantly in action; the respiration and circulation extremely active. There is a great waste of Vital energy, which must be reinforced by frequent supplies of flesh. Hence the expressions of uncovering the teeth in order to tear their prey, uncovering the eyes in order to see, uncovering the claws to seize, make the action of the tiger or lion most formidable Vital expressions.

On the other hand, the graminivorous animals, as the sheep or ox, present few expressions. The skin of the head

is closely attached to the skull, and is capable of but little motion ; the lips cover the teeth, the eye has slow movement, and the expressions are mild and show peaceful intent.

We may state the Law of Expression in animals nearest man in structure : —

The force of the expression is in proportion to the strength of the principal action of the animal when in search of food, or when aroused by resistance of its prey, or when acting in its own defense or that of its offspring.

Of all living structures, the human face presents the greatest number and complexity of physical supports for psychic manifestations.

Let us examine these supports, which in the head and face lie open to our inspection : —

(1.) The most remarkable characteristic of the human head and face, as a structure, is the globular form of the skull, united as it is with the prolate spheroidal form of the face. In this combination of curved lines, and in the approximation of the face to the vertical, lie the highest possibilities of expression through form.

(c.) The student will note that the curves of the outline of the head and face give the element of uniformity ; while the broken lines of the face give the element of variety.

It is the union of these opposite elements that gives our idea of beauty.

The infant's face is an outline made up of curves. The man's face, an outline made up largely of broken lines.

Hence the infant presents, as the ruling expression, uniformity ; the man, variety. The Greek face of Apollo idealizes these elements.

In the human face, age lessens uniformity, but increases variety. Uniformity is allied with monotony ; variety with picturesqueness. Young faces are symmetrical, but weak in

expression; old faces are picturesque and strong. Ah! the rare beauty of some old faces, wrought into harmony by the chisel of hard experiences, softened now by the mellow glow of the sunset!

(2.) The solid parts of the skull and bones of the face form the groundwork for the more expressive parts.

We look to the forms of the solid parts for indications of character, and to the motions of the softer parts for indications of present feelings.

The physical supports for facial expression we may name as: —

- (1.) The skull and bones of the face.
- (2.) The organs of the senses.
- (3.) The muscles and tissues.
- (4.) The brain and nerves.
- (5.) The veins and arteries.
- (6.) The beard, and lines of eyebrows and lashes.

And we may say, speaking broadly, that in the bones rests our sense of stability; in the muscles our sense of motion; in the brain and nerves, ourselves, our souls.

It is through and by physical supports, and in no other way, that the Psychic manifests. And this is true alike of the simplest as well as the most complex organism.

There is no break in Nature's chain of sentient life, and no departure from this central law. We shall base our considerations of the expressions of the face upon it. Let us particularize.

I. *The basis of expression lies in the muscular movement attendant on sensibility.*

Experience tells us that wherever there is motion in an animal there is life. Motion in an organism is another name for life.

Reflex motions in a babe are assertions of life before consciousness has been awakened.

II. *The face is the primitive and basal agent for the expression of feeling,¹ and wherever in the body pain or pleasure may be located, the centre of expression is the face.*

It matters not whether the pain or pleasure be a sensation or an emotion, the face mirrors it. So we have called the face the near centre of expression.

III. *The special organs of sense are grouped in the face, or in close proximity to it.*

This is true, with the single exception of the sense of touch, which is a sensation of the envelope or skin, but which is epitomized in the ends of the fingers and in the lips.

This grouping of highly sensitive organs in a small space, and surrounding them with a delicate network of tissues, easily set in motion, and, moreover, adding outline and color to her display, we may without violence declare to be Nature's answer to Art, when she asked for the highest concrete expression of Form, Color, and Motion.

¹ The author throughout this treatise adopts the nomenclature and definition of Herbert Spencer in his division of Feeling into Sensation and Emotion. Sensations are feelings arising in the bodily framework. Emotions are feelings arising in the mental framework.

(d.) "Why," it is sometimes asked, "are there five senses, and no more?" Simply because there are five states of matter to be sensed, and no more: solids for touching, liquids for tasting, fluids for smelling, air-waves for hearing, light for seeing; and some add a sixth sense, the muscular, and so add weight for the muscular sense.

With our present organs we cannot sense electricity, magnetism, and actinism; and subtler forces, perhaps, even than these, that may exist unknown to us. But Nature has made provision for the reception of the strongest possible impressions consistent with organization; hence not one, but five sense organs. And, curiously enough, she doubles the organ where a *single* function is to be exercised, but makes the single organ do duty where there is a *double* function. So our most powerful impressions are received through the double organs. The ear only hears; it is double. The eye only sees; it is double. But the nose and mouth are single organs, yet they perform the double office of speech and smell, and speech and taste. And these two organs, let it be noted, are two *externally*, but are one *internally*. When they receive *impressions*, they are two; when they are used to give *expression* in voice and speech, they act as one agent of the Being.

IV. *The sense organs are in close proximity to the brain,—the seat of all sensation,—with which they are connected by large nerves.*

These nerves are direct lines of communication. They are wonderful physical supports for psychic manifestations. Stating the problem in terms of matter, they are direct roadways to and from the brain. Stating the problem in terms of mind, they are direct roadways to and from the self,—the Ego.

(e.) Of the sense organs, Luys has graphically said:

"These are the sole and unique open gates by which all stimuli from without, destined to serve as *pabulum vitæ* for the cortical cells of the brain, pass." Thus these organs bring to the Soul the whole external world as impressions, to be returned, through external motion, as expressions.

V. *The face is plentifully supplied with nerves that connect its muscles with the brain.*

Relatively to its size, a larger number of nerves are distributed to the face than to any other external part of the body.

From forehead to chin the whole tract is closely packed with interlaced nerves and muscles. Around the eye, including those moving the ball, there are not fewer than ten distinct muscles, whose innumerable fibres are vitalized by innumerable nerves.

In connection with the cheek and mouth there are eleven muscles. Double these figures for both sides of the face, and apply the rule of permutation to ascertain the number of possible excitations, and it will be readily admitted that the physical supports Nature has furnished seem adequate to present the nicest shades and gradations of expression.

(f.) *Problem for the student of expression: Given the highest conceivable intelligence, the finest E motive impulses, the most acute sensibility, and tell me what subtle passion the human face could not portray.*¹

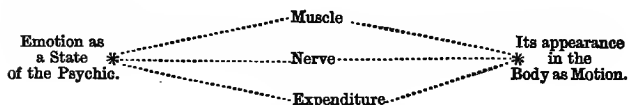
¹ Let the student of expression not think of the body as a mere mechanism, or carcass of bone, muscle, and nerves, but as a living unity of orderly parts, that through differentiation has at last become fitted to give outward expression to the threefold nature of man.

We have indicated the physical supports to psychic expression found in the face.

And we now come to the important question, How is this delicate complexity of muscles, tissues, and nerves operated?

Three factors are essential to the production of a gesture: 1. A muscle. 2. A nerve. 3. An expenditure of Vital force.

It is by this means that an emotion translates itself as motion. A simple diagram will make this plain:—



Let us attempt a closer analysis. The simplest motion is a result of the coöperation of these three agencies. Let us trace the office of each agent:—

1. Muscles are instruments that remain passive until their power is evoked.

They never move themselves. We may say that moving muscles are Will made manifest.

In this outward expression the face leads. It is centre, and all else of the body is periphery.

Swedenborg somewhere pictures a soul just released from its body, who is about to be examined by "his inquisitors, the angels." They look into his face, intently scanning its lines. Soon they extend their examination over the whole body, beginning with the fingers of each hand. "This was explained to me: 'Every volition and thought of man is inscribed on his brain. Whatever, therefore, is in the mind is in the brain; and from the brain is in the body, according to the order of its parts.'"

2. As structure, and seen fresh from an animal, muscles are red flesh, or lean meat. Upon closer examination, a muscle is seen to be composed of fibres, or bundles of fibres; and if examined by the microscope, each fibre discloses fibres within fibres. In the last analysis possible to the most powerful lenses, the ultimate fibres lie in form of disks, like coins piled one upon another.

3. The characteristic of a muscle is its power to contract. To use a figure of speech, contractility is the *soul* of the muscle.¹ The fixed end of the muscle is termed its origin; the movable end, its insertion.

(g.) It will be well for the student to note that not all muscles are attached to bones. The tendons of some pass into soft structures, as, for instance, the orbiculars of the eyes and the round muscle of the mouth.

4. In the play of the muscles, the larger and coarser muscles are Vital in their expressions. The finer and smaller are Emotive and Mental. The finest and smallest are used to give the delicacy and finesse of artistic representation.

And this ratio is constant between the instrument and office to be performed by the instrument. Thus, the legs have large and coarse muscles; their office is locomotion. The hand is a

¹ It is a little curious that the creeping motion of the muscle, as if a live animal were under the skin, should have so impressed the earlier races that they gave a name that marked the appearance. The Greek, Latin, and German gave the same name to the creeping appearance under the skin, namely, "a little mouse" (Latin, *musculus*).

complexity of small and fine muscles, and the face a most delicate net-work of muscular arrangement.

Muscles, then, are our passive "physical supports," ready for motion when either passion or will evokes their power.

What incites these muscles to activity? Our answer leads to a definition:—

The nerves are instruments interposed between the brain (or interior) and the outer world (or exterior).

1. The nerves have but a single office,—that of receivers and carriers. They originate nothing. They all have identically the same composition. They are white cylindrical threads, of an oily, albuminous appearance; and the element phosphorus enters so largely into their composition that Moleschott, thinking he had pushed Nature to the wall, and had wrested from her her greatest secret, cried out when viewing the results of a subtle physical analysis of nerve substance: "*Ohne Phosphor kein Gedanke*" (without phosphorus, no soul!)

2. If moving muscles are will made manifest, nerves are lines of communication, or roadways, over which the will travels.

There are twelve lines of nerves leading from the brain outwards, and thirty-one pairs, or double lines, leading from the spinal cord into the human territory.

3. Nerves are divided into two classes, in ac-

cordance with the nature of their functions. One set of nerves carries impressions from without inwards; a centripetal wave of motion moves inwards. The other set of nerves carries impressions from within outwards; a centrifugal wave of motion moves outwards.

It was upon this physical fact, open to all attentive vision, and simple as it may seem when stated, that Delsarte based his three modes of motion, — eccentric, concentric, and poise.

And further: it was this physical fact that led straight to the deduction that the Psychic uses these three modes of motion to manifest itself in three phases of one Being.

Gestures indicating that we are impressed or affected move from outer towards the inner. *They follow the ingoing nerves.*

And gestures made with the intent to impress or affect others move from inner towards the outer. *They follow the outgoing nerves.*

(h.) The student is urged to ponder these statements. They are the key that unlocks the mystery of Delsarte. It will appear the more evident the more it is thought upon, that the outer (the body) is a veritable correspondence of the inner (the Soul or Being), and that the motive (*motif*), or inner desire, and the outer act, or external sign, are one in expression.

In all mammals, the same relation exists between the nervous and muscular systems.

We may state the *essential condition* of mus-

cular motion. It is essential that the nerve shall pass into direct contact with the muscle substance, so that the minutest fibres of the one shall closely interlace and intermingle with the minutest fibres of the other.

These relations of the two factors, nerve and muscle, are open to analysis by the physicist. The third factor essential to motion — an expenditure of nerve force, which travels along the line and summons the muscle to action — baffles all his search. Aided by the most powerful lenses, he fails to detect the nature of this subtle force. No amount of spying, weighing, measuring, finds this psychic factor.

So all ends in an hypothesis. And this hypothesis the physicist calls “freeing the forces.” The nerve irritant is said to set free the muscle forces, and these liberated forces translate themselves as motion.

(i.) The freedom and ease with which our muscles most frequently used are called into action, and the slight conscious effort we make to move them, would suggest that freeing the muscle force is made with slight expenditure of nerve force.

This conclusion is believed to be a correct one. The freeing force is small as compared with the force set free. This freeing of great forces by small forces is only possible in cases of unstable equilibrium.

Thus, oxygen, hydrogen, nitrogen, and carbon may lie in stable equilibrium for years, side by side; but mingle them in a certain way, and you have a substance, nitro-glycerine ($C_3H_5N_3O_9$), which the slightest blow may convert into a terrible agent of destruction.

So the physicist, Rosenthal, declares that these elements lie in close proximity in our muscles, and in unstable equilibrium; and it is the irritant nerve that releases the force as motion.

But what a mystery of mysteries lies behind this physical process, when an emotion rises in the psychic framework, and the Soul rushes along the psychic pathway into the ample region of the face, and moves its pliant muscles into plastic forms!

And this coming forth of the spiritual into the area of the face, to greet the material, gives ground for a new definition of Expression: "Expression is Feature in the making!"

How this complexity of human features translates through its zones the three states of the Being, and what is the language of these zones and individual parts, must be left for another chapter.

CHAPTER XIV.

THE HUMAN FACE AS AN AGENT OF EXPRESSION (CONTINUED).

IF the human face be examined in profile, or side view, it will be seen to present three natural planes or zones.

1. *The frontal, or plane of the forehead.*
2. *The nasal, or plane of the nose and cheeks.*
3. *The maxillary, or plane of the mouth and chin.*

Now if we examine the profile of an animal with which man is closely allied in structure, say the dog or horse, we shall find the same three natural planes, having the same general structure, containing the same sense organs, and these organs holding the same relative positions in the face of the animal as in man.

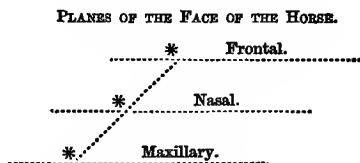
But note an important point of difference between the face of the man and the face of the dog or horse.

In the man the proportions of the face approach the vertical.

In the dog or horse the proportions of the face approach the horizontal.

In a profile view of the human face the forehead, nose, and chin approach a vertical line.

Now, if we should sketch in imagination the outline of the head of the horse, the dots indicating the three planes of the face will show the approach to the horizontal line.



Upon this analysis of the faces of man and the animals nearest him in structure, we formulate a most important principle as ruling in expression : —

I. *The human proportions are the vertical proportions.*

II. *The animal proportions are the horizontal proportions.*

And as corollaries of the above propositions, we further state : —

1. *As the planes of an animal's face approach the vertical the expression becomes more human-like.*

2. *As the planes of the human face approach the horizontal the expression becomes more animal-like.*

Let the student exercise his imagination, and apply these principles to the human features. Take the three planes of the face, and throw them successively out of the vertical, and note the effect upon the expression. Take the maxil-

lary plane: Project the jaws, and you have animal expression of the lowest races of men.

(a.) Even at the centres of our highest civilizations, in all our great cities, types of the carnivora, with heavy and projecting under-jaws, proclaim the persistency of the survival of the animal and brutal Vital.

No language in the whole realm of Form speaks such wonderful correspondences as are found in the arrangement of the bones of the face.

The author would refer the student interested in the expressive language of form and motion to Dr. Rimmer's "*Art Anatomy*,"¹ the most exhaustive treatment made in modern times of the application of Anatomy to Art.

Take the nasal plane: The jutting out of the cheek-bones and the depression of the bridge of the nose give marked animal expressions.

Take the frontal plane: If we retreat the forehead away from the vertical, we get decided expressions of low mental power. If, on the other hand, we unduly project and enlarge the forehead, we get the expression of deformity. But project the forehead only slightly beyond the vertical, and proportion the rest of the features to this projection, and we get that "poise" and majesty of form given by the Greek to the front of Jove, and by Michael Angelo to his concept of God as Creator.

And we may say that ideal perfection of the human face, given the world by the Greek, decreases animal proportions to a minimum, and increases to a maximum the human proportions.

¹ Dr. William Rimmer's *Art Anatomy*, in eighty-one plates from original drawings. Houghton, Mifflin & Co., Boston.

Other defects of individual features usually accompany a departure from the law of the vertical.

Thus the depression of the bridge of the nose is accompanied by the forward opening of the nostrils, with high cheek-bones. The wide mouth, by thick lips.

So we may define the highest type of the physical presentation of man as, —

The animal whose face presents proportioned organs along a line closely approaching the vertical.

And further: that the proportions of the planes of the face, and of its individual features, bear a constant and fixed relation to the development of the Vital, Emotive, and Mental states of the Being.

(b.) Reasoning from these correspondences of the outer features with the inner Being, we adopt the general conclusions, accredited to Delsarte, regarding the expressions of the three zones of the face: —

1. *The language of the frontal zone is Mental in significance; of the nasal zone, Emotive; and of the maxillary zone, Vital.*

Thus the human face is the most expressive summary of the Soul. All psychic motion reflects itself in this mirror of flesh. As the burning-glass, with its double convexity, converges the sun's rays to a focal point of intense light and heat, so the face becomes the focal centre of psychic radiance and clemency, or of psychic heat and violence.

Let us examine the face in motion, and endeavor to interpret the language of its three zones, and of each tract of its territory.

We shall find that the three modes of motion that interpreted the language of the head, torso, and limbs, as agents of expression, will also interpret the play of the features. These modes of motion are eccentric, concentric, and poise. And we shall further find that each feature of the face, as the forehead, nose, cheeks, mouth, chin, ear, and eye, may reveal some Vital, Emotive, or Mental state through both form and motion. And still further: we shall find blends or composites of psychic conditions expressed by the coöperative action of two or more of the features.

(c.) The modern science of evolution confirms the above conclusions. It teaches that structure and functions of the organs of sense in man have been slowly differentiated from the structural type so common to mammals to meet a similar differentiation of the inner or psychic structure.

The mouth and nose of man present a most convincing illustration of correspondence. From service in the animal economy, these organs have been, through progressive stages, differentiated to serve the purposes of speech. So we can say, with the utmost confidence, that the speechless man of the later tertiary or early quaternary period had a prognathous face, with undeveloped vocal organs. *Before man had articulate language he bore a muzzle instead of a face.*

With this brief examination of the human face in profile, let us take a front view, that we may better examine its structure and the disposition

of the sense organs with their surrounding muscles.

We found it essential to human expression that the facial outline should approach the vertical.

We shall find it equally essential that the individual features of the face shall approach the horizontal.

This disposition of outline and features, as structure, presents the highest types of the human face. It realizes Aristotle's definition of beauty: "The union of contrary principles having a ratio to each other." These contrary principles were held to be uniformity and variety. Their union in the face gave the Greek idea of its highest expressions of strength and beauty. So we may state the law of expression, ruling in human features, as formulated by the greatest art teacher America has produced. Let us call this formula

RIMMER'S LAW.¹

The highest forms of the human face are found where the vertical is attained in the facial outline, and the horizontal is attained in the disposition of the features.

¹ It is but an act of simple justice to say that in the author's opinion Dr. William Rimmer's *Art Anatomy* is the most perfect compendium of artistic knowledge, practically applied, now extant. This great teacher and lecturer deserves a statue of purest marble. He is still held in the memories of those students who listened to his art lectures with a warmth of regard approaching reverence.

The book contains nearly 900 drawings, illustrating in the fullest manner the movements and purposes of the human form in the expressions of the passions. Houghton and Mifflin, Boston, 1884.

A few simple lines will illustrate the force of this law : —

PLAN OF THE DISPOSITION OF THE FEATURES IN THE OFFENSIVE PASSIONS.

Arrogance.

Anger.

Pride.

Rage.

Contempt.

Revenge.

Hatred.

Jealousy.

Malice.

Features



towards vertical.

PLAN OF THE DISPOSITION OF THE FEATURES IN HARMONIOUS MOODS.

Calmness.

Benevolence.

Contentment.

Charity.

Dignity.

Wisdom.

Serenity.

Harmony.

Repose.

Features



horizontal.

(d.) Let the student study critically these lines, for in their disposition and arrangement lurks the secret of beauty as defined by Winckelmann. Said this great master of theoretic art: "Beauty consists in harmony, unity, and simplicity. All beauty is heightened by unity and simplicity, as is everything which we do or say.

"If we consider a form in separate pieces, it loses thereby; when we coördinate all the parts into a whole, beauty comes into it.

"The forms of a beautiful body are determined by lines, the centre of which is constantly changing, and which if continually produced would never describe circles. They are consequently more simple, but at the same time more complex, than a circle which, however large or small it may be, always has the same centre, and either includes others or is included in others."

In studying the two figures the first will illustrate departures from both Rimmer's and Winckelmann's laws.

It will be seen that eight lines give the key to the expressions of the animal passions. With man these passions find their root in the Vital Being. Hence savages show their gross psychic natures through strong Vital gestures of the features drawn away from the horizontal. As man emerges from savage conditions the features constantly tend towards the horizontal.

As an exercise in determining the lines of passion, let the student pronounce the name of the passion, — as for instance, pride, — and then note which of the eight lines are engaged in the portrayal when he attempts to illustrate by calling to mind strongly the passion.

We may then conclude, from these considerations, that the highest forms of human expression — those springing from the Mental and Emotive Being — will combine and summarize the two principles we have stated, namely, the law governing the outline and the law governing the disposition of the features.

(e.) The ideal Greek face will best illustrate these two principles. In faces which we call beautiful we find the antithesis of all that we pronounce ugly. Let us consider the separate features presented by the best specimens of Greek art: —

1. A forehead, tracing the line of the vertical, or perhaps protruding a little beyond the vertical, accompanied by a slight recession of the jaws.
2. Cheek-bones so small as to be scarcely traceable.
3. Bridge of nose so high as to be nearly on a line with the forehead.
4. The alæ of the nose joining the face with only slight obliquity, and in front view the nostrils scarcely seen.
5. Mouth small, upper lip short and its line bow-shaped.
6. The outer angles of the eye directed slightly downward from the horizontal.
7. Well-defined frontal sinuses, but not too large.

The antitheses of these points of structure and disposition of features produce ugliness. They are as well signs of mental and moral inferiority. They show the sway of the baser passions, and the descent towards the animal.

The face presents three centres of motion. The moving agents—the muscles—group themselves around these centres.

These centres are also the seat of the three most expressive organs of sense.

These groups of muscles surround the eyes, the nose, and the mouth.

So, each of the three zones of the face presents its form and its centre of motion.

Thus the frontal zone presents the forehead as form, and the eye and brow as motion.

The nasal zone presents the nose as form and the nostrils as motion.

The maxillary zone presents the jaws as form and the lips as motion.

The human face is a study of form and motion. And it is upon our estimate of the significance of these two elements that we almost unconsciously judge the man. In solving the problem we rapidly coördinate the presentation made by form and motion : —

1. The whole face is passed in review as at rest, the relative force and value of the forms presented are coördinated, and we pronounce our estimate of the character.

2. The face in motion is scanned, the present or instant mood is perceived by intuition or “ di-

rect beholding" of certain arrangements of the moving parts which we coördinate, and we pronounce our estimate of the present feeling.

We find in the face, as in the other agents of expression, three forms of gesture, namely, bearings, attitudes, and inflections.¹

And three modes of motion, eccentric, concentric, and poise.

Which reveal the three states of the Being, the Vital, Emotive, and Mental.

Having given in our first chapter upon the face some account of the physical supports by the aid of which the Psychic manifests, and in this chapter having stated two general laws upon which we conceive expression largely to rest, we proceed to consider the language of the separate parts and organs, that — through their relation one to another, and through motion — make the human face the most expressive agent man has at his command through which to manifest his complex nature. And as we have found life, mind, and soul, in each division of the body, we may reasonably expect to find these three conditions or phases of the Psychic existing in their highest activity in the wonderful complexity of form, motion, color, and sensibility — the human face.

¹ For a full discussion of the significance of bearings, attitudes, and inflections, see pp. 71-74.

OF THE FOREHEAD.

The language of the forehead, as form, is Mental. With this decision all the physiognomists agree. In all the mammals we may divide the skull into two parts: (1) the brain case, and (2) the bones of the face. In man we shall find the organ of the mind, the brain, filling a larger skull — when compared with the face — than in any of the larger mammals.

(a.) The deductions of the phrenologists Gall and Spurzheim, Combe and Fowler, that the Mental faculties occupy the frontal regions of the brain confirm our decision. So, common observation and scientific deduction are agreed that the language of the forehead is Mental. But in further confirmation of our opinion we add the logic of a structural law thus formulated by Sir Charles Bell:—

Outward forms result from the degree of development of the contained organs.

We conclude, then, that a well developed and proportioned frontal zone indicates intellectual superiority.

We note certain correspondences of parts of the face based in structure. These correspondences of the outer declare like correspondences of the inner:—

1. *When the forehead is low and retreating, the cheekbones are large and projecting.*

Here the Vital rules and the expression is animal-like.

2. *A fine forehead seldom accompanies coarse animal-like jaws. As the jaws advance the forehead recedes.*

This observation has the force of law in structural development, both of races and individuals.

3. *A convex or rounded forehead indicates an undeveloped mind.*

All babes have this kind of forehead. The simplicity of the outward form is an exact correspondence of the simplicity and homogeneity of the Psychic. Culture the mind, and the convex disappears, the rounded forehead is invaded by straight lines which indicate Mental growth. The homogeneous and simple is giving way to the heterogeneous and complex.

4. *The prominence of the forehead in form of a horizontal ridge, immediately above the eyebrows, indicates aptitude for long-continued Mental labor.*

(b.) The author finds this observation confirmed by the most profound physiognomists, by Redfield, Huatt, Lavater, and Alexander Walker.

We note a few indications of character based upon the disposition of the muscles of the forehead, as shown by the wrinkles: —

1. We have the most ancient authority of Aristotle, that a forehead loaded with wrinkles indicates a gloomy, morose, and overbearing disposition. If these wrinkles are massed over the eye cruelty is indicated.

2. Deep vertical wrinkles of the forehead show that the will has been greatly exercised.

If these wrinkles are invaded by horizontal

lines marking the middle of the forehead, there is evidence of great Mental pain. Both Darwin¹ and Duchenne agree with this observation.

3. Permanent horizontal wrinkles of the forehead are indications of clemency, good judgment, and habitual poise of the Being.

(c.) Ah! how time and the experiences of life chisel the placid faces we brought into the realm of our opening manhood! If the higher Emotive has held sway lines of uniformity have been invaded by lines of variety. Heredity has let in our dead ancestors to peep through our living masks. Our better or baser environment, social or business, has helped to make or mar the mirror of flesh. What an ennoblement of form and feature old age should make us heirs to!

OF THE EYE.

The eye is the centre of expression both of the face and of the body. Whatever sensation or emotion stirs the other centres, some single muscle, or group of muscles in the face, responds, and the eye becomes, as it were, the focal point toward which all the radial lines of feeling converge.

(d.) The movements of the eye are the measure of psychic activity. The student will find that when quick movements of the eye are made from side to side, or up and

¹ Darwin, in his *Expressions of the Emotions in Man and Animals*, introduces, on page 180, a copy from a photograph by Duchenne of a young man simulating the influence of great grief. The expression is realistic to a degree. The union of the vertical furrows with the transverse furrows in the middle of the forehead produces a mark on the forehead like a horseshoe. So good an actor was the young man that when Darwin showed the photograph to fifteen persons in turn, fourteen answered, "despairing sorrow," "great grief," "suffering," "endurance," etc.

down and around — even with no mental motive — there is awakened an impulse to psychic activity. So slow movements of the eye lead to psychic inactivity. Few persons can move the eyes rapidly without a strong impulse to move the body. So, if the eyes be intensely fixed, the body becomes still.

The language of the eye is Mental. It is the controlling agent in Mental expressions.

The eye and its surroundings are divided into active and passive agents of expression.

The eyeball is passive and receptive. The eyebrow, upper and lower lids are active and expressive. Passivity and receptivity ally themselves with the eyeball and its organized parts. Activity — and hence expression — ally themselves with the brow and lids.

Oken called this organized structure of passivity and activity — the eye — “the nervous system in a state of purest organization.” He said: “In the eye the brain unfolds itself in order to turn toward the light.”

(e.) The wonderful complexity of arrangement presented in the mechanism of the eye bears out Oken’s seeming extravagance of statement. Note the wealth of adaptation and contrivance. There are seven matched socket bones. A self-adjusting curtain with its delicate fringes of hair. A projecting eyebrow. A ball made up of two segments of two unequal spheres, one of the segments from a larger sphere than its companion. Six muscles, one of them geared through a pulley to aid in the revolutions of the sphere. Oil and tear glands with an accompanying waste-pipe. In front a transparent lens, the cornea, and behind this the crystalline lens for focussing the rays of light. An

expanding and contracting pupil. An aqueous and vitreous humor. A sensitive plate, the retina, of the finest and most delicate texture, with a yellow spot, so called, where the picture seems centred and where alone it is perfectly clear to vision, the rest of the picture being sketched in. Lastly, the minute rods and cones which the microscope alone discloses, and where at last the known borders upon the unknown.

In expression the eyeball is an indicator. It shows the direction and position of objects in the spaces of two worlds.

It never expresses passion. It simply looks toward the object that occasions the passion.

(*f.*) This can easily be shown. If we cover the lower part of the face, including the mouth and the alæ of the nose, and then give as full an expression as possible of anger or rage — putting into the look the utmost force and fierceness — the most critical observer cannot tell whether we designed to express anger or rage, or were merely looking intently at some object.

The function of the eye is to look out and to look at. This is true of all the mammals. With man alone has it an added function, namely, to look inwards or in upon.

So the human eye has but two expressions ; but if we combine these two with the expressions of the fifty-five muscles of the face, we need many figures to sum up the whole delicate play of the moving mirror.

The two expressions of the human eye are :

(1.) *Attention.* (2.) *Intention.*

The eye is attentive when it looks outward, towards, or at, an object.

It is intensive¹ when it looks inwards, or towards the subject or Ego.

(g.) The student will note that these two movements of the eye, eccentric and concentric, show the relations of the mind towards object and subject. The mind looks at, and gets data for reflection; it looks in, and reflects upon the data it has gathered.

And it is not a forced inference, but one founded in correspondence, that the eye — like the globe which it types — would make an entire revolution, in our reflective states, and look in upon its material empire of thought, the brain, did not its physical limitations forbid.

It does the next best thing. It closes its shutters, shuts out the light, and gives the Ego a chance to retire that it may reflect or contemplate!

And we shall find that the amount of closure of the lids over the globe of the eye corresponds with the amount of intensive activity.

The structure of the eye discloses its primary function to be that of outseeing, and that the function of inseeing came only with the development of the Mental nature. In man and all mammals the eye, in structure, is a camera. In simple fact, it is a box and lenses so arranged as to take pictures of external objects upon a plate of sensitive nerve structure, the retina.

Its primary function being to let the mind see, it, of necessity, must face the object, just as if the photographer wishes to take a picture, he must place the camera in position to receive the impression.

¹ A word happily used by the old psychologists. It is thus defined by Locke. Intention is when the mind with great earnestness and of choice fixes its view on any idea, *considers it on every side*, and will not be called off by the ordinary solicitation of other ideas.

These two functions, then, of outseeing and of inseeing, will account for a very large number of expressions.

(h.) There are clearly two roots from which spring the large body of gestures that make up human expression:—

(a.) *The objective.* *Performing the act because it is of service in the support of life or some of its interests.*

(b.) *The subjective.* *Using the gesture as a symbol or correspondence of some psychic state.*

Exaggerate the act of looking at, or physical seeing, and you have gestures of perception or mental seeing.

Note carefully the action of the eye in the following series:—

1. Interest in an object or subject opens the eyes to take the impression.

2. Curiosity slightly exaggerates the act of physical seeing.

3. Surprise adds somewhat more to the strength of the action.

4. Joy still further exaggerates the action.

5. Hope adds to the action of outseeing.

6. Ecstasy, the sight of the seer, the vision of the mystic; utmost exaggeration of physical out-seeing.

And the antithesis of all these acts of out-seeing holds true in another class of feelings.

Thus, exaggerate the act of physical not-seeing and we have gestures of reflection or mental inseeing:—

1. A want of interest in an object or subject

turns away the eyes, that no impression may be taken, or,

2. A desire to think about or reflect upon what has been seen or perceived closes the eyes that there may be no disturbance of the thinking.

We present two series : —

1st Series : Dissent, depreciation, disdain, disgust.

Note how the eyes rule the expression ! In dissent the head aids the gentle closure of the eyes by presenting the correspondence of unstable equilibrium. The Ego says : “ You see I am out of poise regarding your proposition.”

Depreciation. The eyes first look askance at the object, then are partly closed and turned away. The head assists by a gesture thrown obliquely upwards.

Disdain adds to the gestures of depreciation motions of the nose and mouth.

Disgust adds to the gestures of disdain stronger gestures of nose and mouth, as though the Ego said : “ You are an offense to my eyes, nose, and stomach.”

2d Series : Reflection, meditation, self-examination, thoughtful consideration.

In this series the eyelids close over the ball. The amount of closure and the stillness of the features show the amount of self-introspection. The Ego retires to its Mental centre, reflects, communes, absorbs itself in thought.

This conscious slow movement and approach of the eyelids to cover the globe of the eye is a purely human gesture. No animal save man makes it. The mammals nearest him in structure close the eyes in fatigue, and sleep, or from extreme irritation. With man, the slow openings and closures of the lids are attitudes, and are vastly significant of reflective states.

(i.) It is a matter of common observation, that round and open-eyed people see much and live much in the senses, but think little and reflect less.

Narrow-eyed people, on the contrary, see less objectively, but vastly more subjectively, and think much. Observe the eyes of the child, how open and round they are! He lives to receive impressions. He is full of outseeing impulse and desire; for curiosity is an inheritance dating back to his earliest ancestors. All the while he is gathering materials, moved by motives that are a near approach to the instincts of animals who lay in a store for winter.

What shall turn his eyes inward? When will he reflect? when reason? Fear not; his schoolmaster is as old as Adam, and always abroad! His name is Experience. He turns our errors, our neglects, our failures, our ambitions — all our shortsightedness and round and open-eyed seeing — to good account. He compels us to see again, and reflect upon our seeing.

THE THREE PLANES OF VISION.

It is through the eye that we inhabit space. The telescope and the microscope are complementary eyes, through which we discover the infinity of the great in space and the infinity of the little in structure.

And we have shown how it is that, through

correspondences of vision, our gestures bear a constant and fixed relation to the visible hemisphere.

Hence the three planes which man alone surveys, — the planes of Equality, the Inferior, and the Superior.

The globe of the eye, in outseeing, sweeps through 180° of a circle. Like the hand, it traces, by its motion, vertical lines from zenith to nadir. And it traces lines parallel with the horizon through 180° .

By this means it surveys the three zones of two spheres, — the objective and the subjective spheres.

Thus man is conscious that he stands at the centre of the Universe, and projects radial lines from where he stands into the infinite spaces.

In his littleness, he is a finite speck of matter crawling upon the face of a cosmic sphere; in his greatness, he is a Soul who creates anew the orderly procedure, unfolding, and continuance of the Kosmos.

CHAPTER XV.

THE HUMAN FACE AS AN AGENT OF EXPRESSION (CONCLUDED).

OF THE EYEBROW.

WE have found that the globe of the eye, through structure and function, is an indicator. The eyebrow is a revelator. The eye without the brow simply sees. It takes no active part in expressing passion. With open lids it sees the outer. It closes the lids when it would see the inner.

The language of the eyebrow is Mental in significance. With primitive man, we may say that its language was Mento-Vital.

(a.) With primitive man, surrounded by the complex phenomena of nature, curiosity must have been wonderfully active. It is so to-day in our present races of savages, and in all children.

The desire to see a new object leads; the desire to take it in hand follows. Note the action of the eyebrow.

Says Darwin:¹ "Attention, if sudden and close, graduates into surprise, and this into astonishment, and this into stupefied amazement. Attention is shown by the eyebrows being slightly raised; and as this state increases into surprise they are raised to a much greater extent."

¹ See *Expressions of the Emotions in Man and Animals*, p. 279, chap. xii. D. Appleton & Co., New York.

The degree of the raising of the eyebrows is a measure of the degree of the surprise.

Primarily, then, the eyebrow was raised in order more plainly to see the object, that the Mental nature might draw its inferences.

But this Mental gesture, growing out from the root of simple curiosity, coördinates with gestures of other zones of the face, if the Vital and Emotive natures invade the Mental condition. Thus, if surprise and astonishment are followed by fear, terror, and horror, the other muscles of the face join in forming the expression.¹ From the centres of the mouth and nose the Vital and Emotive natures would add their expressive gestures. The whole body would sympathize with these facial movements. In horror, the platysma would make the neck rigid and wrinkled, the muscles of respiration would add their expression, sweat would exude from the pores of the skin, and tremblings shake the bodily frame.

Through the action of the eye and eyebrow, coördinated with gestures from the other zones of the face, we have revelations from the Vital and Emotive natures.

We conclude, then, that reasonable deductions from both structure and function will declare the expression of the eyebrow to be Mental.

¹ This statement that other muscles must coördinate with the gesture of the eyebrow is fully justified by the remarkable experiments of Dr. Duchenne. He has shown in one of his photographs (see *Mécanisme de la physionomie humaine*) that a widely-opened mouth, with eyebrows only slightly raised, results in a meaningless grimace.

(b.) Students of Delsarte in America, and Delaumosne and Arnaud in France, have represented him — the latter by implication, though nowhere directly — as teaching the following as the language of the active agents of the eye : —

In expression, the eyebrow is Mental; the upper lid is "Moral;" the lower lid is Vital.

The author of this treatise prefers the statement that the three states of the Being reveal themselves as blends or composites through these active agents. He has not yet found reason to adopt the division accredited to Delsarte by these representatives..

By the same authority, Delsarte is represented as giving the following as the expressions of the organic parts of the passive agent, — the eyeball : —

The white of the eye is Vital in expression; the pupil is Mental; the iris is "Moral."¹

While the firm and tenacious structure of the sclerotic coat, which covers the posterior four fifths of the eyeball, may give some ground for the inference that the white of the eye is Vital in significance, it is extremely hazardous to attempt to connect the pupil with the Mental, or the iris with the Emotive (Moral) nature. While we can find no satisfactory basis for these divisions of the eyeball, nearly all physiognomic authorities agree in regarding the eye as the centre of Mental expression.

¹ While the above lines were being written the author received the latest contribution to the Delsarte literature, — *The Delsarte System of Dramatic Expression*, by Miss Genevieve Stebbins, — which is supposed to reflect the teachings of Delsarte through Mr. Steele Mackaye. We quote Miss Stebbins (p. 138): "The pupil is Mental; the white is Vital; the iris is 'Moral.'"

We are constrained to ask whether there is any basis, founded in fact, or in fair inference, for the idea that the pupil is Mental and the iris "Moral" in expression, except a blind adherence to "the universal formula," which Delsarte conceived must apply "to all sciences, to all things possible," — the formula of the Trinity? This *unsupported inference* may some day be proven to be fact. We submit whether there be at present sufficient data for its application to the organic structure, — the eyeball?

We cannot leave this part of our subject without making an observation of value in determining many complex expressions in which the eye leads.

It will furnish the key to a large number of complex psychic states.

The corrugators (muscles that knit the brows) are muscles of the will.

If now we accept the empirical statement of Delsarte, that the will lends itself to whichever state of the Being dominates consciousness, we shall find that the surrounding muscles of the eyes in connection with the corrugators give expressions in which we may detect blends or composite states of the Being.

Let us illustrate by first naming the objective and subjective elements that must enter into our problem : —

1. The three sides or phases of the Being, Vital, Emotive, and Mental.
2. The three modes of motion, eccentric, concentric, and poise.
3. The agents of the Being, the eyes, the eyebrows, lids, and corrugators.
4. The determining power or will, the immediate agent of the Ego.

Of these agencies, the first and fourth are interior. The second and third are exterior.

The motion of the exterior agencies in space and time corresponds with the quality, amount, and intensity of the passion.

Take one of the primitive passions, that of astonishment, and note the action of the external agents.

1. *Astonishment*: Presented through the active agents of the eye as a composite or blend of the three states of the Psychic.

The eyes in astonishment are wide open, the eyeballs are parallel, the lids and brows are raised. The motion is first eccentric, and then poised.

We quote Darwin: "Astonishment is expressed the world over with remarkable uniformity." The Vital act is that of trying hard to see a material object. The Mental and Emotive acts are those of trying hard to see a mental object. So, we find the Vital nature leading the expression in beasts, — more especially with the carnivora, — in savages, and in all children. It is the Mental blend, Mento-Vital, in civilized children that gives the peculiar round-eyed expression of wonder.

In intense astonishment these expressions of the eyes are assisted by other agents. The whole body is stilled. There is a cessation of breathing. The lower jaw falls and the mouth is wide open. It is curious, too, that several races of men in astonishment give a prolonged whistle. This whistling sound is often condensed into the interjection *whew*!

Note, too, the correspondence which astonishment makes with space. We again quote Dar-

win: "A surprised person often raises his opened hands high above his head, or by bending his arms only to the level of his face. The flat palms are directed toward the person who causes the surprise, and the straightened fingers are separated."

If the student would reflect through gesture the astonishment of primitive man, when confronted by something unusually startling and unexpected, let him with a single impulse give the following action: —

(a.) Open eyes and mouth very widely. (b.) Draw in forcibly the breath. (c.) Throw both arms above the head. (d.) React with the whole body.

2. *Firmness*: In astonishment, or in lighter manifestations of the same emotion, — as wonder, curiosity, or admiration, — it will be noticed that the corrugator muscles were not called into action. But firmness is so nearly allied to the will that we may define it as "will in action."

Now, in the knitting of the brow, by the action of the corrugators, we have the external sign which the eyes give of all the emotions that ally themselves with firmness. All the *aggressive* gestures of whatever agent of the body are accompanied by the action of these muscles of the will.

(c.) Dr. Duchenne, in his "*Mécanisme de la physionomie humaine*," calls the corrugator the muscle of reflection. This is only true when in our reflective moods we meet with

opposition. Thinking, pure and simple, stills the face; the brow remains smooth until some obstacle in our thinking arises, then a frown passes over the forehead. The frown is the outer correspondence of "force in will." No gesture of the face is truer to its office. Says Darwin: "Men of all races frown when they are in any way perplexed in thinking." And Sir Charles Bell ranks the corrugator as "the most remarkable muscle of the human face," and says: "When the eyebrows are knit *energy* of mind is apparent."

If firmness as a Mental condition is strongly invaded by the Vital and Emotive natures, we find added to the gesture we have already given — the knitting of the brow — strong gestures of the mouth and clenched fists, showing a tendency to revert to the savage and Vital rage of our remote ancestors.

3. *Stupor*: Nothing could be adduced that more strongly argues the immanence of the Soul in the body than the appearance of the external in stupor. In this state the Mental and Emotive are paralyzed. The Vital makes an instinctive effort to restore order in the physical realm. But the will lends no assistance. This condition of affairs leads to the following gestures of the face.

There is first a struggle of the Vital to compass the act of seeing; so the eyebrows are raised and the lids lifted. The eyeballs, unable to adjust themselves so as to take an impression, are slightly turned upwards. All the muscles of the face are relaxed and the jaw drops. It is clear

that for the time the Mental and Emotive natures are helpless. And if the most persistent psychic force—the life element—cannot restore order in the physical realm, so that the Mental rule may be established, the phenomena called death will ring down the curtain and close the drama.

(d.) No matter what estimate may be given as to the purely philosophic value of the division of the Psychic into the three natures, Vital, Emotive, and Mental, the teacher will find the division of great practical value in his work with students. So definite and clearly marked are the external gestures of each of these three states of the Being that the student soon comes to regard them as *three personalities*, each ready, in turn and on occasion, to invade consciousness and to assume the rôle of chief actor.

The author is confident that the expression of whatever passion, based upon such an analysis, will attain a degree of definiteness and clearness of outline impossible to be attained under the old systems.¹

And why not, if manifestations clearly show that the three phases of the Psychic can seize the body and express themselves through it?

We therefore postulate, with Hermann Lotze, the existence of an entity called the Soul, which inhabits and manifests through its body.

The greatest of purely subjective thinkers, Hegel, has given such a wonderful analysis of the passions that we may be excused if we quote him.

Like Oken, he connects expression intimately with “the entity called the Soul.” To read his realistic sketches is

¹ The author of this treatise may be excused, perhaps, by teachers of expression, if he emphasize the value of the method above named. He has taught the large classes of the Boston School of Oratory by its use, and with a degree of success which he is certain could not result from purely abstract methods.

good medicine to one sick with the miasma of materialism. He thus graphically describes grief as "that powerless self-interment of the Soul." What could better describe the concentric motion of the return of the Being to its centre?

Terror "is the collapse of the Soul before a seemingly unconquerable antagonist."

Shame "is an anger of man against himself, a reaction against the contradiction between what he ought to be and what he is, a defence of the Inner against the Outer."

Laughter "results from the perception of a sudden introversion or immediate contradiction, either physical or psychical. We feel *our* substantial poise or balance, the insubstantial balance of another amuses us. So the Inner immediately suffuses the smiling countenance, while the Ego's repulsion of the ridiculous is expressed through the voice by repeated sudden explosions of sound — ha! ha! ha!"

OF THE NOSE AND CHEEKS.

In our examination of the frontal zone of the face we found form in the outlines of the forehead, and motion in the gestures of the eye and its surrounding muscles.

So, in the nasal zone we shall find form in the outline of the nose and cheeks, and motion in the alæ of the nostrils.

We may state, in the language of two great observers, the principle ruling the expressions of this zone.

Dr. Rimmer thus formulates: —

When the nose attains its highest development the Vital or animal ceases to rule the expression.

And Oken: *The human face approaches per-*

fection when the nose is parallel with the spinal column.

(a.) To these conclusions of a great teacher of art anatomy, and of a great philosophic observer, we may add that of a great artist, Michael Angelo: "*The stronger the deviation of the nose from the vertical, the further the face deviates from a perfect form.*"

The Greek nose is the most ideally human of all the features; all other noses are a compromise with animalism.

There is a substantial agreement among close observers that the form of the nose is an index of character. Thus, Lavater, Redfield, Alexander Walker, Gratiolet, and physiognomists generally, agree that large hooked noses indicate a love of power, desire to rule, acquisitiveness, aggressiveness; while the opposite type—the thin, straight, and finely-fashioned nose—indicates sensitiveness, delicacy, a retiring and unaggressive character, and decided æsthetic tastes.

(b.) A study of the nose in the accredited busts or portraits of Cæsar or Napoleon will reveal in every line the vast ambitions of these colossal characters.

The depression of the bridge of the nose and the forward opening of the nostrils are allied with animal features; and wide-spread nostrils, opening outwards, usually accompany staring eyes, and denote "frog-like stupidity."¹

(c.) Dr. Rimmer declares that a high nose is seldom found in a face of the animal type.

¹ Let a beginner, says Le Brun, draw a head, and the face will always bear an expression of stupidity, — never one of malignity. Is not this an important fact? Stupidity is incongruity.

The phrenologist, Gall, associated sensuality with a flat nose.

(*d.*) It is related of Socrates that Zophyrus told this wisest of the Greeks that the shape of his nose indicated a tendency to drunkenness, theft, brutality, and lasciviousness; to which the great philosopher replied that such were his natural dispositions, which he had striven to conquer.

Stated broadly, we may conclude that the language of the nasal zone is Emotive in expression. The nostrils are Vital, as primary expression, but their gestures, in our present civilization, show blends of the Mental and Emotive.

(*e.*) That the nostrils are Vital as their primary expression both structure and function seem to confirm. As structure, they are cartilages moved by muscles and excited by motor nerves proceeding from the fifth pair.

These same nerves also excite the lungs to action. In function, the nostrils are connected with the Vital act of breathing, and they pulsate with the outgoing and incoming breath in animal excitement. Shakespeare, in "*King Henry V.*," allies their action with the Vital:—

"Now set the teeth and stretch the nostril wide;
Hold hard the breath."—*Act III. Sc. I.*

So both structure and function seem to pronounce the language of the nostrils to be Vital, though fine Mental and Emotive blends arise from this gross animal root.

OF THE EAR.

Oken has somewhere said: "Seeing gives us a consciousness of the universe; hearing, a consciousness of self."

The anatomist divides the human ear into three divisions, — the external, middle, and internal. It is in the inner ear that the process of hearing completes itself. There, hidden in the deep cavity of the skull, securely locked in a bony case, are the complicated terminal organs of the ear. It is here that the auditory nerve penetrates the solid structure of the skull, and embraces with its minute filaments the wonderfully delicate and sensitive organs found in the labyrinth. What must be the subtlety of that essence that translates the tremblings of these minute terminal points into that form of consciousness which we call hearing! What wonderful power of analysis in these terminal organs, where the spiritual comes out to make such subtle contact with the material!

The organ of Corti — the nerve key-board of the ear, according to Helmholtz — is a minute instrument with about three thousand sensitive strings. What wonder that Music is a universal language, which every one has learned he knows not where, that every one understands he knows not why? Music is consciousness communing with itself. And in some moods, listening to music, we hear our whole Being discourse. In such moments the soul pours forth a flood of reminiscences, which we fail to account for as belonging wholly to our mundane existence. Indeed, the author calls to mind a sensitive soul, who declared: "I never listen to the dreamy tone-fanta-

sies of Chopin but I am convinced that I have heard those strains in another and previous existence." Ah! that the breath and haze of an atmosphere of music can so sense and type the spiritual!

If, then, we consider the inner ear in its intimacy with the Soul, we must pronounce its strongest alliance to be with the higher Emotive nature.

(a.) The power of music to stir the emotions seems to be universally acknowledged. But not until the amazing researches of Helmholtz was it conjectured that music had its physical basis in the wave-motion of fluids, and in the pulsations of the forms of energy which we cover with the term "natural forces."

It would seem that everything moves to measure. In the Universe this orderly principle swings to and fro like the shuttle of a great loom, and the soul of man finds the highest correspondence of this gigantic rhythm in the tone pulses of music.

We can without violence say of the senses that they make strong alliances with the Psychic. Thus we may say that the sense of seeing is allied with the Mental nature, the sense of hearing with the Emotive nature, and that the senses of touch and taste, and the muscular sense, make strong alliance with the Vital nature.

Delsarte is reported by Delaumosne to make the language of the external ear Mental in significance.

Lavater declares that a finely formed and delicately shaped ear indicates Mental sensitiveness

and æsthetic tastes, and says: "Nature has divested it of ornaments; its dress is simplicity, delicacy, and completeness."

Dr. Rimmer remarks: "A coarse ear accompanies coarse hands and feet; if the ear be well made, hands and feet will be well made."

(b.) An argument deduced from the admitted physiologic truth, that organs develop in proportion to the amount of their use, would argue that the ears of primitive man were Vital in expression.

"If," says Darwin, "our ears had remained movable, their gestures would have been highly expressive in rage, as is the case with all animals that fight with the teeth."

According to modern conclusions of the evolutionists, the ear is an atrophied organ. In primitive man, say even so recent as the glacial period, it was larger than now and easily movable.

The atrophied ear of to-day has lost motion. Its Vital significance has gone. As form, its Mental and Emotive significance is an element of considerable strength when coordinated with the moving features.

OF THE MOUTH.

We have passed in review two planes or zones of the face, the frontal and the nasal, and have stated the reasons for our inferences that the Psychic manifests — as if by preference — its Mental nature through form and motion of the frontal zone, and its Emotive nature through the form and motion of the nasal zone.

If we accept the essential expressions of these zones as Mental and Emotive, we shall find very strong evidence, in structure, function, and corre-

spondence, that the expression of the third zone — the maxillary — is Vital.

In all land mammals, except man, the jaws are used for seizing, turning, and placing food under the action of the teeth. This Vital act was also largely an action of primitive man. And we may say confidently that if with man these organs had held their primitive function, the higher office of speech, through their differentiation, would have been an impossibility.

(c.) That the European of to-day is quite another being from the quaternary man the most modern discoveries confirm.

Quatrefages, speaking of this far-distant era, says: "The climate was that of the glacial period, — ice covered Europe as far south as France. Man contended with the fury of the elements and with the fury of the carnivora."

Of the Cronstadt race, he says: "The cranium and face must have presented a strangely savage aspect. The face was prognathous, rude, and massive; the bones of the limbs, thick and protuberant, must have sustained great muscles. This being disputed the earth with the great mammals now extinct."

And of the skull of the Neanderthal man, discovered near Düsseldorf in 1857, he says: "The frontal sinuses have an exceptional development, like the anthropoid apes."

With the evolution of the Mental faculties came a corresponding differentiation of organs and functions to suit the advance.

And if we ask ourselves what most distinguishes man from the beasts, the answer will lead us back to the operative causes that have at last released the human mouth from its primitive animal office. The distinguishing cause is speech.

The speechless man of perhaps as far back as the close of the tertiary era — hair-clad, large-muscled, heavy-jawed, with coarse lips easily retracted from his canine teeth — used the mouth for tearing flesh and for fighting.

But along with speech-development came a gradual refinement of the features: the jaws began to release themselves; the lips became more mobile, and assumed a curve; the chin rounded itself; the cheek-bones retreated; the forehead advanced towards the vertical; and soon there lurked in the upward turn of the angle of the mouth, and the raising of the inner extremity of the eyebrow, the first outward signs of a sense of humor, — that purely human sense that came in with speech.

Thus the differentiation of the mouth kept pace with, and became the visible correspondence of, man's release from the Vital, and advance toward the heights of the Mental and Emotive.

Thus at last he has become the animal of proportioned features.

We conclude, then, that structure, function, and utility show that the primary expressions of the maxillary zone were Vito-Vital; and further, that the civilized man of this nineteenth century still gives, through the play of the mouth, rudiments and faint reflections — echoes, we may call them — of the animal gestures of his savage progenitors.

(*d.*) Darwin, in his masterly treatise, to which we have so

often referred the student, "*The Expressions of Man and Animals*," gives illustrations of these rudimentary or reflected gestures, which, as he remarks, are intelligible, if we admit that the structure and habits of all animals have been gradually evolved. Thus, in sneering or defiance, the upper lip is lifted and retracted in such a manner that the canine tooth on one side of the face¹ alone is shown, the face being up-turned and half averted from the person causing offence.

Darwin pertinently remarks that it is a surprising fact that man should possess this power to uncover the canine tooth, or exhibit any tendency to its use. To account for this civilized gesture, he goes on to say: "We may readily believe that our male semi-human progenitors uncovered their canine teeth when prepared for battle, as we still do when feeling ferocious, or when merely sneering at or defying some one, without any intention of making a real attack with our teeth."

OF THE LIPS AND CHIN.

As structure, the lips are formed by a circular muscle, which entirely surrounds the mouth. This single muscle closes and purses the mouth by an inward motion. This motion is opposed by ten muscles, which have their origin in prominent points of the bones of the face, and converge towards the mouth, opening it, and moving the lips in various directions.

We find, then, eleven muscles giving form and motion to the lips. Five muscles surround each eye, and four give play to the nostrils.

Here are twenty-five elements that enter into

¹ Usually the left canine tooth is uncovered. With primitive man this gave freedom of action to the right hand in striking, and to the mouth in tearing with the formidable canine tooth.

Missing Page

(e.) Among the disciples of Delsarte there is a difference of opinion regarding the language of the lips and chin. That the upper lip is Vital, the lower lip Emotive, and the chin Mental seems to find the greater number of supporters. This empirical division is not entirely without reason, if based in function and correspondence.

As we have elsewhere said, most people when sneering lift the upper lip from the canine teeth on one side of the face. This is a rudiment from man's Vital era. Among animals, no correspondence of a human sneer is stronger than the action of uncovering the teeth by the carnivora. Indeed, the word "sneer," according to Wedgewood, is the same as "snarl," which was originally "snar," the "l" being merely an element implying continuance of action.

Lavater declares that the upper lip, by its upward gesture, is a universal sign of menace and effrontery.

The lower lip moves much more freely than the upper. This mobility is seen in the acts of laughing and crying in young children. Children preparing to cry tremble the under lip before the burst of feeling.

The connection of the lips with speech and with ready expressions of feeling makes blends of these agents proceeding from the Mental and Emotive natures difficult to classify. That these agents, through form and contour, express mental delicacy and beauty of moral character, no close observer can doubt. That they make ready response to instant moods is a matter of common observation.

Speaking broadly, we may say: The upper lip is more expressive through form and contour. The under lip is more expressive through motion.

The chin rounds off the ellipse of the face. Lavater truly remarks that deformity here is hideous.

(f.) The chin is the more remarkable as a feature of ex-

pression since its forward projection is distinctive of the higher races of man.

The lower animals can truly be said to have scarcely more than a vestige of the human chin.

Curiously enough, the muscles which render the chin so prominently a human feature are the same that by their action give the human expression of a resolution to resist oppression, as also the expression of the assertion of superiority.

We cannot close our comments upon this expressive region of the face without reference to the half-poetic and half-scientific deductions of the quaint old physiognomist Carus.

With entire gravity of conviction he has mapped out the territory of the mouth and chin, and has given a local habitation to Mental and Emotive qualities. Love is given the entire rule of the under lip, while in the narrow dell between the mouth and chin dwell four of his relatives, Clemency, Pity, Sympathy, Benevolence. Five qualities group themselves along the contour of the upper lip and spaces below the nose, while Cheerfulness peeps out from the corners of the mouth.

We conclude our analysis of the expressions of the separate features with a confirmatory generalization of Lavater : *The upper part of the face down to the root of the nose is the seat of thought ; it is the region where our projects and resolutions are formed. It is the office of the middle and lower zones to unfold them.*

CHAPTER XVI.

THE HUMAN VOICE AND ITS EXPRESSIONS.

THE great naturalist Agassiz, in speaking of voice as a correspondence of the nature of animals, said: "Voice is a fundamental characteristic of the animal, adhering to the nature of the being, and incapable of disappearing while the animal lives."

Oken declares "the cry of an animal to be an expression of its innermost."

Thus, everywhere lions roar, wolves howl, horses neigh, savages cry. In a word, through its voice the animal expresses and epitomizes its being. Its voice is as unmistakable as its gestures, and always corresponds with them. The stealthy glide of the carnivora and their gesture of striking—swift as a beam of light—are not more characteristic than is the ferocious blend of radical and vanish in the stress of the voice.

We may state with confidence that in expression *the language of voice—pure and simple—is Vital.*

In man, and the land mammals to which he is allied through structure, voice has the same significance. It is the expression of the Vital or instinctive nature given to the ear as sound.

In the cries of all land mammals are detected modulated sounds, sometimes approaching musical intonations. With man these sounds become conscious modulations and intonations, made expressive by the use of musical technique.

No other animal attains the inflected voice, which is used alone by the thinking animal, man, to accompany articulations and to mark the relations of ideas. And the simple and homogeneous being of the animal finds in sound and its modulations a sufficient vehicle of expression. It is because of the wonderful complexity and heterogeneity of the Being that man has such an unswerving complexity of agents through which to manifest. Of the three bodily agents we may say, speaking broadly, that *the voice reveals his Vital, gesture his Emotive, and articulate speech his Mental nature.*

And all these forms of expression — except cries of animal pleasure and pain — and reflex motion came as man assumed the vertical and gained the use of the released fore limbs.

The development of faculty and the use of faculty still keep equal pace in man's advance.

(a.) Gustave Jaeger has clearly pointed out the intimate relation between the vertical position and the production of voice sounds. He shows that there are two indispensable physical conditions to the production of the modulated voice in mammals. These conditions are : first, the ability to expel the air from the lungs with a sustained effusive outgo ; and second, the ability to give a slight pressure or stroke,

so as to break the outgoing breath into impulses or separate sounds.

Now, the having these two conditions of phonation would give the mammal possessing them a superiority over his congeners. In man these conditions exist in their highest perfection. On the other hand, the quadrupeds, bound to earth by four tethers, find great physical difficulty in giving free motion to the horizontal lungs. So, it is a noticeable fact that when our large quadrupeds, deer or cattle, call loudly or continuously, they halt, stand still while so doing, showing that the fore limbs must rest in the act of calling.

The structure of the instrument of the voice is essentially the same in all land mammals, and is connected with the respiratory act. Everywhere animals breathe to live. So the human instrument of the voice is the differentiated end of the breathing-tube. This differentiation is accompanied by a further differentiation of mouth, tongue, lips, and nose. So that a statement of the progressive functions of the mouth is also a statement of the progressive evolution of the Psychic, and marks the stages of human progress.

Man, in his Vito-Vital state, fed and fought with the mouth. He uttered significant cries through the mouth, and began to connect sounds with ideas of things, as he advanced toward the Mental. He now reveals through the mouth the highest moods of his Emotive and Mental nature, by the use of perfected musical and speech forms. So, we may define the human voice as the audible correspondence of the Being.

And we may add to our psychological definition the admirable technical definition of the eminent American philologist, Professor Whitney: "Voice is the audible result of a column of air, sent from the lungs, stamped with sonancy and variety of pitch by the larynx, and individualized by the mouth."

Let us first examine this instrument as a structure, and then its outcome or play as recognized by the ear.

OF THE ORGAN OF THE VOICE.

The instrument of the human voice is most nearly represented by the church organ. Musically speaking, it is a reed instrument. It consists of the lungs, — the air chest or bellows, — capable of sending through the wind-pipe a current of air, which vibrates the natural reeds or lips of the tone box or larynx. These vibrations from the lips of the larynx pass into the variable cavity above it, which consists of the pharynx, mouth, and nose. The current of air is forced from the lungs by the action of a powerful muscle, the diaphragm.¹

The result of the play of this instrument is the human voice. We introduce a diagram to show the relative positions of the parts that go to make this complex organ.

¹ This word still holds its early signification, "a partition wall." Voice proper came in with the diaphragm. Only in the mammalia is there a complete diaphragm. Only in man are the lungs placed vertically above the diaphragm.

Now, as this instrument is a musical instrument, the result of its play should be musical.

Variable
Cavity.

Larynx.

Wind-pipe.

Lungs.

Diaphragm.

And being a *living* entity in structure, fashioned by the plastic hand of Nature, while all other musical instruments are made by the hand of man, its music, by parity of reasoning, should give forth elements not found in dead structures. That it does so is a recognized fact. Beyond a doubt, the success of the vocal artist depends upon his power to give forth qualities from his instrument which we recognize as distinctively psychological.

The Soul must attune the instrument to the theme.

(b.) Nothing is so utterly unsatisfactory in the whole realm of art as the human voice with a perfected technique, and no soul behind it! If the artist cannot inform his technique with psychic force, no grimace of mechanical forms of time, force, and movement can save him! The music-box may be absolutely accurate in time, force, and movement; it is only when technique is a vehicle in which rides the Being that it becomes of value in any high sense.

The vocal instrument, if we admit it to be a musical instrument, must combine the parts of a musical instrument.

No instrument can give forth musical sounds unless it combines in its construction three elements. These three essential elements are: 1. *A motor element.* 2. *A resonant element.* 3. *A vibratory element.*

(c.) Take as illustration of the combination of these essentials the most primitive of musical instruments, the drum. The motor element is the drumstick; the vibratory, the tense membrane that forms the head of the drum; the resonant element, the body or cavity. So, in the more complex instrument, the piano, the keys, or inner hammers moved by the keys, are the motor element, the strings the vibratory, the body and inclosed space the resonant.

These same elements enter into the living structure of the organ of the human voice. The diaphragm is the motor element; it acts upon the bellows, the lungs, and sends a column of air through the wind-pipe into the larynx, which holds, protects, and favorably presents the glottal lips to the outgoing air. These lips of the glottis are the vibratory element. The pharynx, the mouth with its arch, the nasal cavities, the bones of the face, are the resonators.

Without doing violence to the facts presented to our reason — facts of structure and function — we may fairly infer Nature's purpose held from the beginning to the consummated end. *All this complex structure was evolved that two lips of the glottis might present their sensitive and parallel edges to the outgoing stream of air.*

Such is the instrument of the human voice. Clearly a Vital structure at its root. Its outcome and product the audible symbol of life. He who doubts should study attentively that epitome of the human race, the babe, a constant witness that organic sensibility to pain first gave impulse to voice with primitive man, and was the first step in the evolution of language.¹ The

¹ The author is aware that Darwin has argued that the vocal organ was developed through the force of sexual impulse, in order that one sex might call or charm the other.

Is it not more probable that a greater nervous excitement would come from the intense pain consequent upon the laceration of the body in the fierce contests to which primitive man was exposed?

startled cry of the new-born babe is an echo of the Vital cry of the race. Nothing is so fine a correspondence as this purely animal cry of the babe. Through the cry he announces his subjugation to organic want. He lives, eats, sleeps, cries, and wails. This is the Vital round of his existence.

— “ We come crying hither.
Thou knowest the first time that we smell the air
We wawl and cry : — I will preach to thee : mark
When we are born, we cry that we are come
To this great stage of fools ! ”

But what other elements shall we find in the human voice besides this persistent Vital, which allies itself so unmistakably with our animal and instinctive Being ?

The coördinated action of two organs is essential to the production of voice. These organs are: 1. The larynx. 2. The ear. Nature's laws governing sounds are fixed and invariable. So we have, as the constant physical factors in our problem, the ear, the larynx, and invariable Nature.

Let us examine the outcome from the action of these three factors : —

At first thought, a sound of the voice reaching the ear seems very simple ; but if we should stop to analyze it, we should find it to be quite complex, and when analyzed by a trained and expert ear, aided by the delicate and exact mechanical instruments now in use by physicists, it yields to persistent solicitation its wonderful properties.

The exhaustive researches of the German physicist, Helmholtz, have reduced the phenomena of sound to an exact and intensely interesting science. And what does experimental science say about the sounds of the human voice? Upon analysis, all sounds that reach our consciousness, as voice, are found to have three properties : —

1. We recognize that a given sound is louder, or less loud, than some other sound with which we compare it ; and we say of it that it has the property of intensity, force, loudness.

2. We recognize that it has a higher or lower place on the musical scale than some other sounds we have heard ; and we say of it that it has pitch or position, high or low, upon an arranged scale of sounds.

3. We recognize one other property. If we ask each one of a half score of persons to give separately the same sound, with the same degree of loudness and with the same pitch, we find that each person gives forth a different kind of voice from any one of the others. We find each one to have his own voice as distinctively as his own face. So we say of the voice that it has a third property, — timbre, quality, or *Tonfarbe*.¹

When we have found these three elements we

¹ Neither the French nor the English word is so finely descriptive of this subtle element of the voice as is the German *Tonfarbe*, *tone color*.

have found all that a physical analysis yields. We know all that is ascertainable at this stage of scientific progress.

(*d.*) At present neither physical nor psychological science can give any adequate account of the subtle element which we all recognize in the human voice, and which, for the want of a better term, we speak of as "magnetic." Of an hundred readers, actors, or singers, one only may possess this power. But the voice that thrills, arouses, electrifies, yields nothing to physical analysis. Does law govern here, or is all caprice?

Three elements determine the voice as the three lines determine the triangle. We diagram these elements : —



Two conditions of voice are frequently spoken of in books of elocution as properties of the voice. These are Time or Duration, and Distancing or Reach.

It will be readily seen that the continuance for a longer or shorter time of a tone can only be a condition of the tone, and no part of the sound presented to consciousness, — just as a year of one's life is no part of the essence itself.

So of reach of voice, which may be defined as an inherent power by which the voice penetrates space, and is heard above other sounds or confused noises.

This carrying power we conjecture to be in some

way dependent upon the elements that go to make the composite tone sent forth by an accurate adjustment of the vocal organs. It is always an accompaniment of the poise of the Being, and those who use it to cover distances declare that it is not by using high degrees of force that they accomplish it. They often describe it as "placing or throwing the voice."

(e.) The author of this treatise has taught, successfully, as a part of vocal technique, "carrying power of voice," under the term "Distancing."

So far as he has been able to analyze, the process is both physiological and psychological. There is (1) the purely physiological process of taking, holding, and giving out the breath, — the one thing that can never be neglected; and (2) the physiological process of opening the organs of the throat and nostrils.¹

Now comes the psychological process, which we may state briefly as (1) poise, (2) think distance, (3) throw the voice, as the hand would a ball, to a distant ear.

These outer and inner processes fulfil the best conditions. Let the student remember that to depend upon force or loudness will be to court defeat! Musical tones travel; noises disintegrate, and go to pieces. It is the "poised" voice that holds the subtle elements which are presented as phenomena of "distancing."²

¹ Open the throat and nostrils, as if about to gape; this action gives freedom to the larynx, and resonance from the mouth and surrounding cavities. No part of vocal technique is more important.

² To the technique of distancing should be added frequent practice in sustained increase of force, called in Music "crescendo." This movement is the vocal correspondence of enlargement. The object grows larger and larger as one looks. This crescendo movement is a powerful element in vocal expression. The following passage from Othello will suggest the use of these two technical artifices: —

Roderigo.

I'll call aloud.

Iago. Do, with like timorous accent and dire yell

As when, by night and negligence, the fire
Is spied in populous cities."

Miss Anna Dickinson, then reigning queen of the lyceum platform, was once asked how she was able to be heard so distinctly in Music Hall, Boston. This great audience-room seats nearly three thousand people. The platform is large, and the benign bronze Beethoven stands behind the speaker. At the extreme opposite, high above the audience, is the figure of Apollo, the gift of the great actress, Charlotteushman, to the city of Boston. Miss Dickinson's answer epitomizes our processes of distancing: "When I come on to the platform, and find myself facing the great audience, I make a full pause, then take a good ready, and speak to Apollo!"

As the human larynx is the differentiated end of the breathing-tube, we should expect the act of breathing and of voice production to be in some way connected. And so intimate are their relations that Oken has, in happy phrase, called speech "gentle respiration."

Life demands for its continuance two movements, followed by an interval of silence. These movements are involuntary as a life process, and occur in the following order: 1. Inspiration. 2. Expiration. 3. Silence. As an art process, the movements are under control of the will, and occur in the following order: 1. Inspiration. 2. Silence. 3. Voice, or audible expiration.

These three movements regulate the play of the instrument. And silence is by no means the least of the three in importance. He who has not learned the art significance of *moments of silence* has studied to little purpose. In expression, silence is indeed golden.

(f.) Technically, in expression, silence is termed Ellip-

sis. The word signifies "to leave out;" hence, a space, a chasm. Delaumosne reports Delsarte as saying: "Gesture is an elliptical language." The space covered and the time taken by an agent in these moments of silence in the midst of a discourse give the artist his greatest opportunity; his ellipses must be filled with expressive gesture, the face leading all the other agents.

The strength of the ellipses will be readily surmised in the following sentences from Shakespeare:—

"Not on thy sole, || but on thy soul, | false Jew!"

"Put out the light, | and then — || put out the light!"

Ellipses are ruling artifices of the Emotive nature. Hence, in our highest moods of passion, we make little of words, but much of the tones, ellipses, and gestures which accompany the words. Grammatical and logical relations give way to musical treatment, until tones and gestures find their climax in stress and rhythm.

Sterne thus satirizes the critic who would bind Emotive expression by logical and grammatical rules: "'How did Garrick speak the soliloquy last night?' 'Oh, against all rule, my Lord, most ungrammatically! Betwixt the substantive and the adjective, which should agree together in number, case, and gender, he made a breach || stopping as if the point wanted settling. And after the nominative, which your lordship knows should govern the verb, he suspended his voice in the epilogue a dozen times, — three seconds and three fifths by a stop-watch, my Lord, each time!' 'Admirable grammarian! But in suspending his voice, was the sense suspended likewise? Did no expression of attitude or countenance fill up the chasm? Was the eye silent? Did you narrowly look?' 'I looked only at the stop-watch, my Lord!' 'Excellent observer!'"

Thus respiration becomes representative phenomena of the Being. It is to our actions what words are to our thoughts, or tones to our emotions. If we hear the breath we know the mo-

tive behind it! Physical and psychic strength both lean upon our respiration.

Note how our breathing illustrates the three states of the Being:—

The Vital predominating, respiration is quick, strong, and sustained.

The Mental predominating, respiration is slow, interrupted, and often suddenly arrested.

The Emotive predominating, respiration is deep, sustained, and poised.

Note the order of action as each of the three natures in turn dominates consciousness.

1. THE VITAL IN ACTION.

We are out walking along a narrow, pleasant country road. The sights and sounds of summer are full of delight, and we are full of the glow and exhilaration of Life. Our breathing is quick, strong, and sustained. Walk, breath, and heart-beats pulse in rhythm. Suddenly, without a moment's warning, a carriage with two frightened horses appears. What happens? The Mental immediately arrests the body; a sudden inspiration, — almost a gasp, — then a cessation of breathing!

2. THE MENTAL IN ACTION.

The Mental is now in action. It stopped the breath and stilled the body, but at the same instant seized the eyes; the motions of the two

globes are like two flashes of lightning from two near clouds,—the wrinkled eyebrows. In the moment of swift glancing, the Mental observes, compares, concludes! The breathing is resumed.

3. THE EMOTIVE IN ACTION.

The Emotive now poises, and balances the body. What ought to be done is recognized, and the three natures — the whole Psychic — blend in the act of arresting the horses.

Thus the body, in all its acts, is seen to be the outer correspondence of the Psychic.

OF TONES.

There is a propriety in classifying the ear as an organ of voice.

So thoroughly is it auxiliary to speech that no ear literally signifies no speech.

As we have shown in another part of this treatise, the structure of the human ear and its intimate physical connection with the brain declare it to be an instrument for the reception, analysis, and presentation to our consciousness, of sounds.

Upon the sensibilities of the ear rests the science of music.

Helmholtz relates the power which music has over our feelings to motion. So music is the subjective correspondence of matter in motion. It expresses our psychic moods, because we seem to see with the eye of the ear the dance of objects

in space. We thus translate the subtle force that the Greek philosophers called rhythm. In a word, we execute in idea a dance of tones in time and space. And we are entirely justified in saying that the tones of the human voice are audible correspondences of the subtle law of the universe, — rhythm.

From the animal cry of primitive man have arisen the perfected arts of Music, Poetry, and Oratory. The crude, monotonous, but rhythmical sing-song of the savage has given way to an idealized language of wonderful complexity and significance. And this development is a result, and not a cause. It is as inevitable a result of evolution from the Vital root as the ripened grain from seed and blade.

We may summarize our conclusions : —

I. *Primitive voice was the crude and Vital language of the sensations.*

III. *The modulated and intoned voice is the language of the Emotive nature.*

II. *The inflected voice, accompanied by articulated or jointed sounds, is the language of the Mental nature.*

(g.) That the human voice was primarily a reflex gesture from the animal root, and was the outcome of sensations of pain and pleasure, both structure and function of the instrument still continue to testify in the utterances of sounds heard wherever man is in the savage condition, or wherever in civilization there is a momentary "reversion" to the savage instincts of our earliest progenitors.

So the novelist of two hundred years ago might picture in

a single sentence the raucous voice of his age and time: "The jeers of the theatre, the pillory, and the whipping-post are very near akin." Even in our advanced civilization, in intense excitement of the nervous system, caused by an overwhelming access of rage or terror, there comes back into the voice the echo of a far-distant age of savagery! Hence, human cries of terror, rage, alarm, fear, cries of pursuit and of flight, cries of hunger, cold, and thirst, rooted in organic want, all tell of the animal that still lurks in ambush, ready to spring forth!

Hugo, in his novel "Ninety-Three," sketches in a few lines a peasant mother's cry when she sees her three children in the burning tower of La Tourge:—

"The mother recognized her children. She uttered a fearful cry. That cry of indescribable agony is only given to mothers. No sound at once so savage and so touching! When a woman utters it, you seem to hear the yell of a she-wolf; when the she-wolf cries thus, you seem to hear the cry of a woman."

In technical training for a superior voice, all the elocutionist's artifices are founded upon the three essential properties of the voice,—Force, Pitch, and Quality or Tone Color. Each of these essential properties we shall find to have a physical basis. Let us consider, briefly, what scientific investigation reports regarding the phenomena presented.

THE ELEMENTS OF FORCE AND PITCH.

The sensation of strength or loudness (technically, "force"), as a physical fact, depends upon the extent, swing, reach, or amplitude of the air-waves set in motion by some mass of matter in vibration. The larger the waves, the louder the sound.

(*h.*) A simple illustration, addressed to the eye, will make this plain. Suppose we throw into the still water of a lake, each in its turn, a marble, a stone the size of a base-ball, and a cannon-ball. As each of these objects strikes the water there is formed a ring, which, moving outwards, spreads in all directions over the surface in a continually enlarging circle. The weight of the stone determines the size and extent of the wave.

Now what is seen to take place upon the surface of the water takes place in the air, with this difference: the air-waves spread outwards like a globe from the point of agitation, in the spacious sea of air, in all directions. As a physical fact, then, loudness or force depends upon the amplitude, reach, or extent of the air-waves proceeding from the vibrating bodies.

The sensation of pitch, as a physical fact, depends upon the number of vibrations given forth in a second of time. The fewer the vibrations, the lower the pitch of the sound; the greater the number of vibrations in each second, the higher the pitch.

(*i.*) Let us take an illustration from the piano. If we should strike the lowest "C," and immediately after the highest "C," and mark the number of vibrations sent forth, as did Helmholtz by delicate instruments, we should find for the lowest "C" 32 vibrations in a second, and for the highest "C" 4,096.

So we find that the pitch of a sound depends entirely upon the number of vibrations in a second, and not at all upon the body set in vibration. It is quite indifferent whether these vibrations come from the strings of the violin or piano, the vocal lips of the human larynx or the metal tongues of the harmonicon, the trembling lips of the trumpeter or the reeds of the organ; any sound from any instrument that is a result of the same number of vibrations in a second of time has always the same pitch.

THE ELEMENT OF TONE COLOR.

The sensation of quality or timbre, as a physical fact, depends upon the forms of the air-waves sent out from the vibrating body. As a purely physical fact, the conditions of a harsh or of a harmonious sound are impressed upon the air.

(*j.*) The student will note that none of the early books upon elocution gave any account of the phenomena of quality. The solving of the mystery is an achievement of modern science, largely due to the genius of Helmholtz. This great scientist reasoned that, as force was due to the amplitude of the air-waves, pitch to their number in a second, quality might be due to their form. An exceedingly exhaustive and interesting series of investigations and experiments ended with the throwing upon a white screen, for the eye to see, the actual forms of these waves. And, curiously enough, soft, melodious, smooth, and agreeable tones gave rounded curves of waves, while sharp, harsh, grating sounds gave angular and irregular forms. Tuning-forks traced Hogarth's line of beauty, while some harsh notes from the strings of a violin gave sharp angles, for all the world like a schoolboy's first attempt at writing. The variety and beauty of these wave-forms Helmholtz found to be beyond computation.

We must mention one other discovery of Helmholtz bearing upon tone color. It had long been known to musicians that when a tone was given from a musical instrument a certain number of both higher and lower tones accompanied it. These accompanying tones were weaker and fainter than the tone struck out upon the instrument.

Helmholtz called these accompanying tones, overtones. The tone which the ear recognized he called the fundamental tone.¹

¹ It is impossible for an untrained ear to perceive these overtones. So accustomed is the ear to receive the tone as a whole, and the fundamental tone so overbears the overtones, that, though they exist

We may state, briefly, the conclusions arrived at by Helmholtz bearing upon quality. These conclusions are the result of the most critical, patient, and exhaustive analysis:—

1. There is no musical instrument whose fundamental tone is not accompanied by overtones.

2. The number, kind, and intensity of the overtones differ in different instruments; and it is this difference that causes the characteristic quality of any instrument.

3. The fundamental tone, if accompanied by consonant overtones, gives to the ear harmonious, agreeable, and pleasing qualities. If accompanied by dissonant overtones, it gives to the ear harsh, unpleasant, unmusical qualities.

As physical phenomena, we may formulate the law for quality or tone color:—

Law: The timbre, tone color, or quality of tones depends upon the form of the fundamental sound-wave as modified by its accompanying overtone waves.

Thus it will be readily inferred that the quality or color of each voice is entirely personal and characteristic. Each one's voice is his voice just as truly as each one's face is his face. Each human voice is a differentiated product of an instrument alike in structure with all races of men upon the earth.

We may make a division of expressive qualities of the voice into (1) Natural and (2) Acquired or Modified.

Natural qualities are the result of inheritance, normal growth, and a healthy condition of the vocal organ. These qualities are fixed and permanent, and undergo but slight change even under the persistent drill of the elocutionist.

above and below the fundamental tone, only expert and musically trained specialists can detect these blends or composites of sound.

Modified qualities are largely the result of imitation, and are acquired by art study and practice. They must have their bases in structure and inheritance, are to a certain degree under command, and can be consciously employed by the speaker as art elements in expression.

In conclusion, the elements of force, pitch, and tone color found in our analysis of sound, together with the two elements of time and rhythm, — not found by analysis, but always accompanying the voice, — give all the elements of voice that we use when we sing, recite a poem, or speak as orators or actors. And if we were told that our every-day talk was a series of tunes we should be incredulous. Yet every affirmation we make, every question we ask, and, more especially, all our enthusiasms of expression are set to music. More than this is true: the shades of meaning, the amount, intensity, and freedom of the emotion, are told by the tune. So the sentence means one thing if we sing it to one tune, and quite another thing if sung to another tune.

So we have tunes into which we project our humor, our rage, our grief, satire, petulance, prayer! Life is so complex that words alone cannot serve us. If we could not sing tunes of our feelings set to these words, how often we should be dumb!

Each of the essential properties of the voice — force, pitch, and quality — we shall find to be variously modified by the action of another in-

strument. The double play of two instruments acting as one gives — as outcome — Speech.

To the instrument of articulate language we shall devote the concluding chapter of this treatise ; for, if our views be correct, the long chain of organic events upon the earth ends with man ; and through speech man best realizes the full correspondence of his threefold and proportioned Being.

CHAPTER XVII.

ARTICULATE SPEECH AS AN ELEMENT OF EXPRESSION.

IN considering in the preceding chapter the outcome of the human vocal instrument, we came to the conclusion that voice was primarily a manifestation of the sensitive or Vital nature, and that tones or modulated voice were manifestations of the Emotive nature. What shall manifest the third or Mental state of the Being?

Let us consider the intellect or Mental nature as wanting to manifest itself. And for convenience let us separate the inseparable in fact, the knowing nature from the feeling nature. Let that state of the Being which perceives, memorizes, makes pictures, thinks, reasons, generalizes, desire to express itself. How can it do so? What means, what instrument, has it? Let us see. A professor of geology has brought into the class-room a stone as large as one's fist. He lays it upon the table in view of a class of twenty students. Now, what the intellect can know about this stone is its relations as shown by points of resemblance and difference to all else in the range of its knowing. If it could know

all its possible relations to other things, it would know all possible to be known about the stone. Suppose it to know many of these relations, founded in identity and diversity, how is it to tell to the twenty students any part of what it knows?

Its entirely adequate instrument is articulate speech. Give the intellect gesture, — it fails. Give it voice, — it is inadequate. Through speech alone can it reveal itself.

(a.) Through spoken and written language man recreates the past. Let the language of a people be entirely lost, and a reconstruction of any age or time of that people becomes impossible. The written remains of a language are, in a psychological sense, fossils imbedded in the banks and drift of the period. One day there comes along an archæologist who shall breathe life into these dry bones, clothe this exhumed skeleton with flesh, and lead back into the present the long-buried past.¹ Sayce has justly said: "One might be tempted to call language a kind of picture of the universe, where words are figures and images of all particulars."

But let us approach nearer the heart of our subject and examine it more closely.

Spoken language is sound made significant. That is, back of the sound there is a thought. Articulated sound, then, is thought outwardly embodied. Historically, the sentence, and not the word, comes first. The sentence is the unit of thought.

¹ As a most notable instance of the reconstruction of a great era in Roman history, through an exhaustive study of "fossil" language, the student is referred to Froude's *Cæsar*. The age, time, pressure of events, the customs, religion, ambitions of an era, environ the colossal proportions of imperial Cæsar.

(b.) It is a mistake to call the word the unit of thought. As a psychic experience — easily tested by any one — the thought greatly precedes the construction of the sentence. We may say that the thought comes as a whole and instantly. We never think first the subject, then the predicate, but we relate subject and object by a simultaneous psychic act, and then we make it objective in a spoken sentence. We think in flashes, we construct with words.

So the sentence consists of two factors, one the external sound, the other the internal thought.

When, however, a thought which, again and again, had taken a whole sentence to express it becomes familiar and in every-day use, convenience urges condensation, and we make a single word stand as the sign of the sentence. And this labor-saving process, by which an abstract stands for many words, is as much an evidence of an advanced civilization as is a modern Ames plough over the primitive plough — a crooked limb of a tree drawn by cattle to scratch the earth. "The number of abstracts," says Sayce, "possessed by a language is a gauge of its development;" and he adds, "We cannot realize the mental struggles primitive man made to gain ideas now so familiar to us."

Oken called a word a crystalized thought. If our thoughts upon a given subject are not clearly held, not well defined, we are apt "to talk all around it," when a few well-chosen words, with much thinking, would as surely condense values for us as a single gold eagle condenses the value of ten silver dollars.

As an illustration take the concept "man." It is expressed by a monosyllabic word, spoken by a single impulse of the voice. And yet it covers each one of the millions of human beings upon the earth. But when a race of undersized men is discovered in the heart of Africa, no one word can, at first, cover the new concept. A man of this race is called "the short man with a large head;" after a while he is called "dwarf." That a child or savage could have called, at first sight, the object that draws the train of cars over the rails an engine, would be possible only upon the supposition that he held in mind the idea of the Latin word *ingenium*,—*inborn*. So the child calls the locomotive engine the "puff, puff," and the savage calls it "the swift horse that breathes fire."¹

We find speech to be a complex physiological process, which answers to a complex psychological process. A threefold objective presentation of a threefold Being. The spoken word alone is the whole word. It presents to the ear a triple blend or composite, and one may detect the whole Being in a finely spoken sentence: in

¹ That the savage, upon first sight of the locomotive engine, entertains the idea that the object is alive, and like himself can dictate its motions and scream with its voice, there can be no doubt. Hence, with the savage, the sight of, and the sound made by the object would give it a name of more than one word. But the word "engine" discloses the fact that he who called the marvelous machinery, moving as if by an inner impulse, "the engine," held the full significance of the Latin *ingenium*: innate spirit, soul, or life. (From *in* and *gen*, root of *gignere*, to beget.)

sonancy we may detect the correspondence of the Vital nature; in intonation, the correspondence of the Emotive; and in articulation, the correspondence of the Mental.

(c.) Whitney declares the term "articulation" (jointed) to be "precisely and in the highest degree descriptive of human speech utterance, as distinguished from the utterances produced by the organs of the lower animals." He adds: "The term 'articulation' is one of the happiest hits ever made in the way of nomenclature by the ancient founders of our civilization and science."

One might say that articulation is a succession of joints or segments by the aid of which thought walks.¹

The printed word is the symbol of the real word, but the spoken word plus gesture is the real word. It is an accord of three. It presents to ear and eye a triple blend.

Thus the whole Being externalizes itself through voice, gesture, and articulation. Hence, the difference between reading an essay to an audience and speaking it from three centres. Mathematically it is the difference between one and three. Psychologically it is the difference between giving your thought and giving your soul! Practically this difference represents the wide chasm between success and failure as an orator.

¹ The analysis of an author's thought can be best taught by *slow pronunciation*. By this means the pupil thinks the separate elements, and gives them oral expression *while he is thinking*.

OF THE ORGAN OF ARTICULATION.

In our last chapter we described the structure and operation of the instrument whose outcome or play is voice.

We found the organ of the voice to be the differentiated end of the breathing-tube, and that its primitive office was connected with the life process. It was evident that if, by any considerable differentiation of this breathing-tube, it became capable of giving forth a variety of sounds, those sounds would be correspondences of the Vital nature.

(d.) This correspondence of the Being with the physical organ which serves it seems to have suggested to Delsarte a twofold division of the voice into vocal and dynamic. He said: "There are two kinds of loud voices, — the vocally loud and the dynamically loud." This accords with his theory that voice is primarily the language of our sensations, and is rooted in the Vital nature, while that in the voice which expresses the conscious forces of the Being, he would term dynamic.

Another statement seems to make clear this twofold division: "*A voice, however powerful it may be, should be inferior to the power which animates it.*"¹

The articulatory organ is the differentiated mouth with its enclosed and surrounding parts. To him who weighs impartially the constantly accumulating evidence, it will seem that this is the final differentiation upon earth, both of the race and of the individual. And this view is

¹ See *Delsarte System of Oratory*. Pub. by Edgar S. Werner, No. 48 University Place, New York.

fortified by the discoveries of modern anthropology. Vogt, Bouillaud, Ferrier, and Darwin had reasoned that there must be a seat in the brain for the faculty of articulation.

To the researches of Broca, Nature yielded the secret which she had so long and so jealously guarded. The great French anthropologist demonstrated the existence of a special seat of the faculty of articulate speech, localized in the posterior extremity of the third frontal convolution, especially on the left side of the brain.¹ When this tract is injured the man is still able to think and to connect his ideas, but cannot summon the muscles into action for articulation.

(e.) The remarkable experiments of Hitzig and Fritsch upon the cortex tended to show the existence of centres in the brain which govern definite groups of muscles; but it was left for Ferrier to demonstrate the exact position of these centres. He has shown that all the muscles of the body have their tracts in the cortex of the brain. He has accounted for all the muscles of the body, and finds that their centres in the cortex are arranged in their order from below upwards, — face, arm, leg, torso. And this order agrees with the progressive evolution of our sense faculties. Dr. Lauder Brunton finds that the lowest tract upon the cortex is that which controls the muscles of the face. So we find the lowest animals seize food with the mouth. We next find the arm tract developed, next the tract that controls the legs, and lastly the tract that controls the muscles of the torso.

¹ It is not by accident that we are right-handed. Modern research has disclosed that the left hemisphere of the brain presides over the movements of the right side of the body. Heredity has given, by constant transmission of faculty, a greater amount of activity to the left hemisphere of the brain than to the right.

And one point deserves special note. The higher and the nearer to the fore-brain these centres, the more they require education. Thus, the articulatory centre requires long practice to perform its exalted service. So all our art forms, to be of highest value in after life, must have their foundation laid in childhood.

The act of articulation is an organic result of three factors : —

1. *A material seat in the brain of a psychic faculty, that strives to express itself by the use of jointed sounds.*

2. *A specialized organ to serve this faculty.*

3. *Motor agents between the brain seat and the special organ.*

The result of the play of this organic instrument is articulate speech. Through articulate speech the Mental nature manifests itself in completeness. Said Oken : “When conversing, man is a self-manifestation unto self.” By the act he makes that exterior which a moment before was interior. So “to utter” is to put outside one’s self, — “to make outer.” In deep thought we carry a world within us ; we project a world into the outer when we speak.

The action of three material agents gives, as a result, articulation. These three agents are the tongue, the lips, and the lower jaw.

Let us examine the structures that go to form the articulatory organ.

The mouth cavity is situated above the larynx, and receives the sound struck out by the lips of that instrument. The ceiling of the mouth is

the hard palate. This ceiling has the form of an arch. The floor of the mouth is the lower jaw. Its sides are the cheeks. At its back is the muscular enlargement of the œsophagus, — the pharynx. It is nearly filled by the tongue, the synonym of speech. It can be lengthened by the protrusion of the lips. It is made variable — that is, longer or shorter, closer or opener — by the play of its parts.

We may find the happiest correspondence of the play of this complex instrument in the action of the human hand, and so may say that it manipulates the tone sent to it. And we do no violence to the exact facts when we say of one who has a finished articulation that he is *dextrous* through the mouth.

Three movements control the size of the mouth cavity. In speaking, these movements are acts of intelligence, and are dictated from the speech centre of the brain. And we may conclude articulation to be purely an act of the Mental nature.

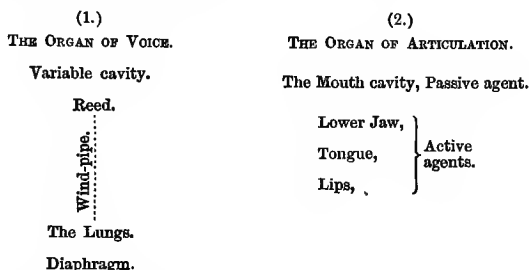
(f.) Two great discoveries of the functions of inner organs go far toward determining a Philosophy of Expression. These discoveries are, first, that of Corti, — of the delicate organ in the cochlea of the ear, which the microscope discloses as literally a harp with three thousand minute strings, with nerve fibres reaching each string, and whose office is to respond to the most delicate variations of tone.

And the second is that of Broca, already described. The small tract of the brain — the seat of articulate speech — should be named the organ of Broca, after its great discoverer.

The three movements that control the size of the variable cavity are, —

1. *The movements of the lower jaw.*
2. *The play of the tongue, towards or touching any part of the walls of the mouth.*
3. *The play of the lips, by loosening, tightening, or protruding them.*

(g.) We give in diagram the arrangement of both the voice and articulatory organs : —



We shall now readily comprehend that spoken language, as it reaches the ear, is a complexity of sounds made by the action of two organs.

We have presented as a whole to consciousness a complexity of sounds arising from the simultaneous play of the voice organ and the say of the articulatory organ.

Let the student bear in mind that the ear is an indispensable ally of the voice organ, and the organ of Broca of the articulatory organ. We may now let this complex organ play and say. The play of the voice organ has projected voice into the variable cavity. Here it is jointed, moulded, or segmented by the action of the lower jaw, tongue, and lips. If we observe the process of the formation of these jointed sounds as they issue from the mouth, we shall find that sometimes the mouth channel is open and free from all obstruction, from the vibrating lips of the glottis to the outer air.

Sometimes we find the channel contracted and narrowed, but nowhere entirely closed. Again, it is partly obstructed; and once more, it is entirely closed against the outflowing stream.

Now it is this issuing stream of sound poured through an open or narrow mouth-channel, through a partly obstructed channel, or breaking through an entirely obstructed channel, that gives to the ear all the elements that enter into speech. And when, by an act of intelligence, trains of these segmented sounds become significant of ideas, we have spoken language.

OF THE ELEMENTS OF SPEECH.

All spoken language is made up of the sounds of two organs acting with a common impulse. The sounds are tones and articulations. As they are organic, they are essentially the same the world over. The human organs of speech have the same general structure, and hence give forth the same sounds.

As all violins give forth the sounds of the violin, so all human speech organs, of whatever race, age, or sex, give forth the sounds of the human instrument of speech.

A universal language, to be read and spoken by men of all races and tongues, must be represented by symbols which shall show to the eye the positions and motions of the organs when in the act of speaking.

(*h.*) Such a diagram alphabet of organic symbols has been given to the world by A. Graham Bell.¹ These symbols rep-

¹ *Visible Speech*. Published by Cewperthwait & Co., Philadelphia.

resent the positions and actions of the organs, and thus make speech visible.

The written language, composed of these diagram letters, is easily learned, and children of whatever race can be taught to read and speak the sounds indicated by the letters.

Its adoption would give the same tongue to all the nations of the earth.

With the deaf and dumb, two senses — sight and touch — supply the want of hearing and speaking. The eye of the deaf mute sees an organic position. A sensation of touch feels this position and locates it, say in the throat or palate, or on the tongue or lips. The result of the most patient teaching is that the dumb speak through the education of the sense of touch. They literally feel their way into speaking!

Let us examine a little more closely these sounds or elements of spoken language. All sounds reported by our ears are either tones or noises. The whistling of the wind, the rattling of a wagon, the scraping of the feet on the sanded floor, the filing of a saw, — all the puffs, hisses, buzzes, clicks, that reach our ears are noises.

Tones are the products of musical instruments. The piano, the violin, the flute, give forth tones.


If this division of sounds be correct, the sounds we make in speaking are also tones and noises. We call the tones vowels, and the noises consonants.

The peculiarity of the vowels is that they are sounds resulting from an open channel outward from the lips of the glottis. There is no obstruction to the outgoing sound.

In all consonants there is obstruction. The

active organs in some way obstruct the vocal channel.

In organic positions and actions of and within the variable cavity of the mouth — the cavity extending from the soft palate to the protruded lips — we shall find all possible sounds of the complex organ, from the purest musical tones due to structure, use, and training, to the clicks, buzzes, puffs, hisses, and gutturals due to some form of partial or entire closure. We diagram the extremes of vowel sounds. Between these limits lie all possible vowels.



Ä as in *father* is the fundamental tone of the instrument, the purest outcome from the lungs, throat, and variable cavity.

The human instrument tuned to *ä* always gives this fundamental tone, and can give no other. If we open the throat naturally and without effort, as in the act of gaping, getting everything out of the way of the issuing stream, — the teeth out of the way, the lips and tongue out of the way, — *ä* as in *father* will be the sound given, whether by Saxon or Celt, by African, Chinese, Esquimo, Indian, or Hottentot, by every man, woman, or child, of whatever race. This starting-point established, it becomes a necessity of structure that if we narrow the oral cavity at different points and by different degrees, all the vowels will be sounded in their turn.

Tuning the instrument for its fundamental

sound, the vocal *ä* as in *father*, and proceeding towards closure, we form a triple series of vowel sounds along three lines of closure.

1st Series: along the line from ä to ē.

This series is due to the action of the tongue, which marks intervals or spaces in the mouth cavity, the largest space giving *ä*, the narrowest *ē*.

This series of vowels is called the lingual series.

2d Series: along the line from ä to oo, as in ooze.

This series is due to the pushing forwards and rounding the lips, which lengthens the mouth cavity and thus creates new resonant spaces.

The series of vowels thus formed is called the labial series.

3d Series: along the line from ä to various closures made by the combined action of the tongue and lips.

This series is due to the coördinate action of the tongue and lips. The vowels thus formed are called glides. They are composites or blended sounds.

Along these three lines of closure the vowel sounds of all languages must be found.¹

If we regard the vowels as musical tones, all the articulations must be ranked as noises. But

¹ The student is referred to Professor Whitney's *Growth of Language* and Bell's *Visible Speech* for an exhaustive treatment of this subject. Both these authorities found their scheme of vowel sounds upon organic structure, and can be profitably studied together.

the ear easily marks a distinction between these noises. It divides them into two classes : —

1. Those in which it recognizes a considerable basis of tone, and which are not decidedly unpleasant or inharmonious, — such composites as *b, d, l, m, n, r, ng, v, th* (as in *then*), *z, zh*. These elements form the class of sub-vocals.

2. Those in which the ear recognizes the slightest basis of tone or none at all, and which are, for the most part, unpleasant, inharmonious, and to be avoided, — such noises as *p, t, k, s, f, sh, th* (as in *thin*), *ch*. These elements form the class of aspirates.

Now, our speech is made up of these three classes of sounds. And the delight the Psychic finds in tone and rhythm and in dramatic presentation is evident from the way it realizes itself by using the three kinds of sounds. So we may say that the Psychic expresses its musical states through the vowels, its passionate states through the sub-vocals, and that it uses the aspirates to form the boundaries or outlines of the projected tones.

And through correspondence, these blends or composites of three kinds of sounds present to the ear what graceful forms present to the eye, namely, the elements of the beautiful, — uniformity and variety.

(i.) Tennyson has given a fine illustration of the value of vowel sounds in the art of poetry. In the lines we quote, he speaks of the inscription upon the cenotaph of Sir John Franklin in Westminster Abbey : —

“ Not here ! The white north has thy bones ;
And thou, heroic sailor soul,
Art passing on thy happier voyage now,
Toward no earthly pole.”

Note how these vowels are attuned to gratify the sense of tone and rhythm. The poet begins with the short sound of “o.” This sound must be struck with the radical stress ; it will not admit of quantity. But the purely English “o” in “north,” modified by “r,” is a most musical element ; next comes the complex “i” in “white” and the long “o” in “bones,” which could be sung rather than spoken. But the whole series of sounds find their climax in the resonant march of tone upon the words “thou, heroic sailor soul.” The vowel long “o” is the proudest and “a” the most musical of the English vowels. What poise, dignity, strength, and harmony of grateful sounds the above lines present to the ear !

We cannot refrain from another quotation from a poem on the death of Princess Alice, where he makes a climax of vowel sounds that are richer through speech than any set musical treatment could give : —

“ Thou England’s England-loving daughter,
Dying so English thou wouldst have her flag
Borne on thy coffin.”

These lines seem cast in the most suggestive form for treatment by values, tone color, and rhythm.

Now, the sub-vocals are equally expressive when depth of passion rules the utterance. The correspondence for the inflections of voice in our deepest Emotive states is with the force of gravity. And the sub-vocals lend themselves to this downward movement more readily than the vowels.

The author had said this much to a student one day. She was reading the play of Julius Cæsar. These lines occurred : —

“ *Cassius.* Age, thou art shamed !
Rome, thou hast lost the breed of noble bloods !
When went there by an age, since the great flood,
But it was famed with more than with one man ! ”

My student read these lines with great force, but with shallow downward inflections. When told to give the deepest possible downward slide upon the sub-vocal "g" in "age," upon "m'd" in "shamed," upon "m" in "Rome," and to give three successive deep falling slides upon the sub-vocals in the words "more," "one," and "man," she met with most gratifying success.

Of one thing we may be entirely certain: that the spoken language of to-day, in this advanced civilization, is not the language of the England of a century ago, nor is that of the era of Shakespeare the language of Chaucer, nor is that of Chaucer the language of our earlier Saxon ancestors, nor did theirs bear a very close resemblance to the Aryan or race language.

Whitney says that the primitive language of our family had not half the sounds heard to-day. Spoken language is a living tree. In the lapse of ages it is root, trunk, branch, flower, fruit.

The oldest trees of language on the earth have borne no improved fruit. Nor do they take kindly to engrafting other stock upon the old. According to Sayce, the language of the nomads of the desert of Sahara has been stationary for the last four thousand years. And yet it is a thrifty though slow-growing tree, compared with that revealed by the oldest monuments of Egypt, "decrepit, outworn, with none of the bloom of creative youth."

According to Dr. Edkins, it takes twelve hundred years, in Chinese, to grow a new tone. So a new tone in the Chinese language is a twelve-century plant!

In the Aryan root word, man is he who thinks, he who means. And man is man in virtue of the faculty of articulate speech.

Said Martins: "Articulate language is the distinctive characteristic of man."

Said Darwin: "Articulate speech is peculiar to man." And Haeckel: "Nothing can have transformed and ennobled the faculties of the brain of man so much as the acquisition of language."

And with a broader spiritual insight, Oken said: "In the mind of man universal life has become subjective, and language is this subjectivity externalized."

In conclusion, we may say that, with the evolution of the mouth organs as an instrument of expression, man has reached the climax of physical differentiation.

It is not probable that a new being is to appear upon the earth, with a physical structure differing in any essential from the present man.

The exterior has completed itself. Any further differentiation must be looked for along the parallels of the mental, ethical, and spiritual.

Along the psychic parallels we may expect Nature to complete her design, held from the beginning of life upon the earth, to crown her creative acts by the presentation of a being in whom the Spiritual shall realize itself.



